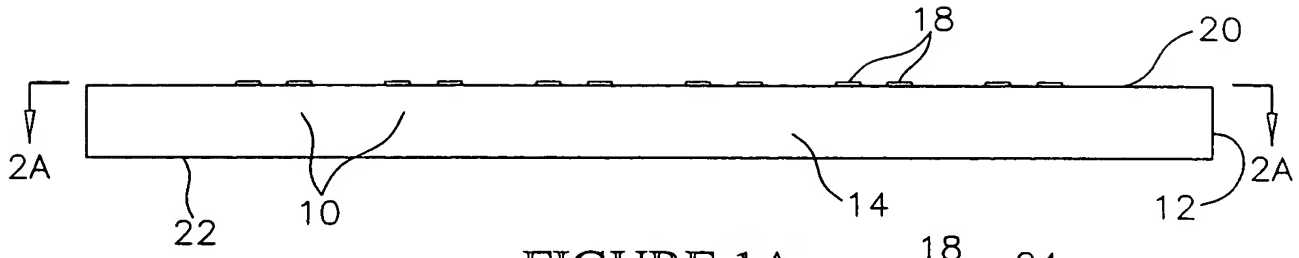


FIGURE 1A

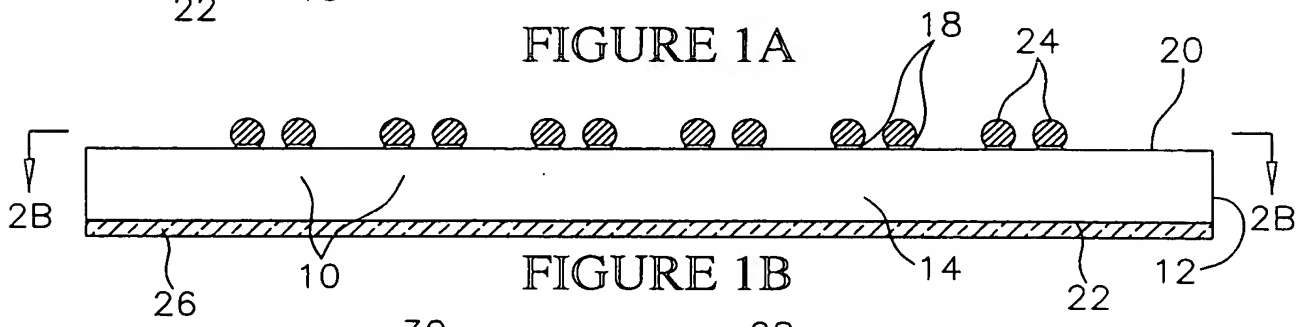


FIGURE 1B

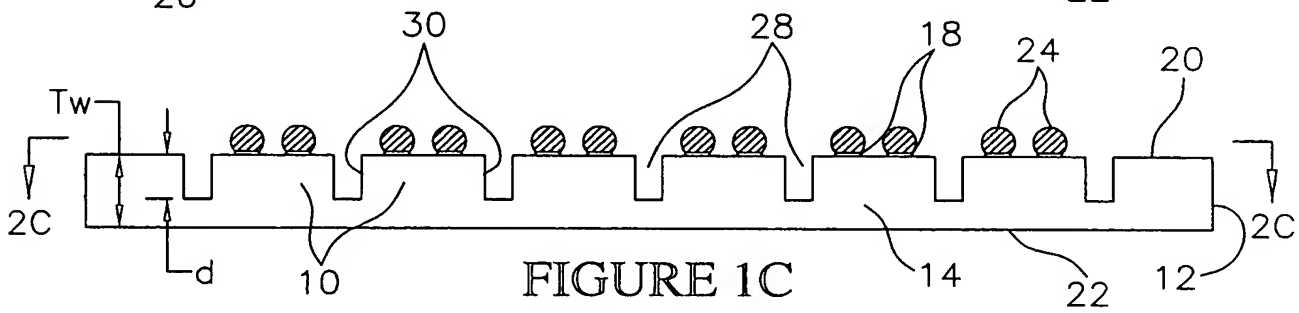


FIGURE 1C

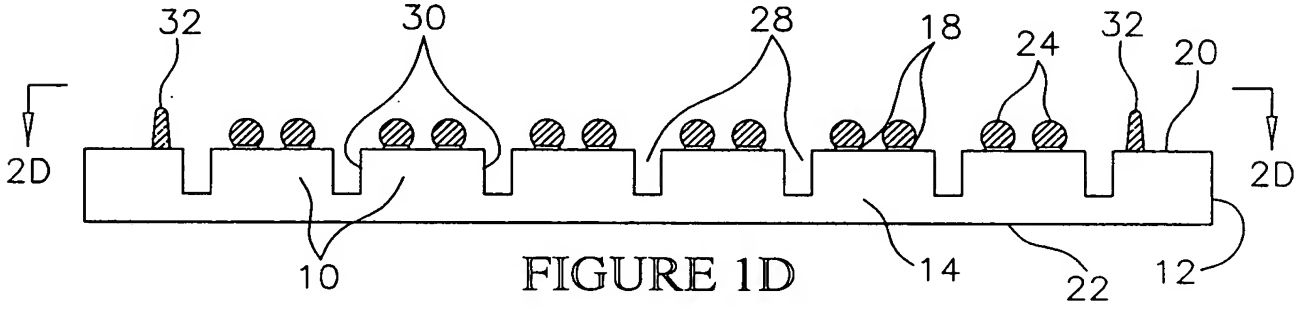


FIGURE 1D

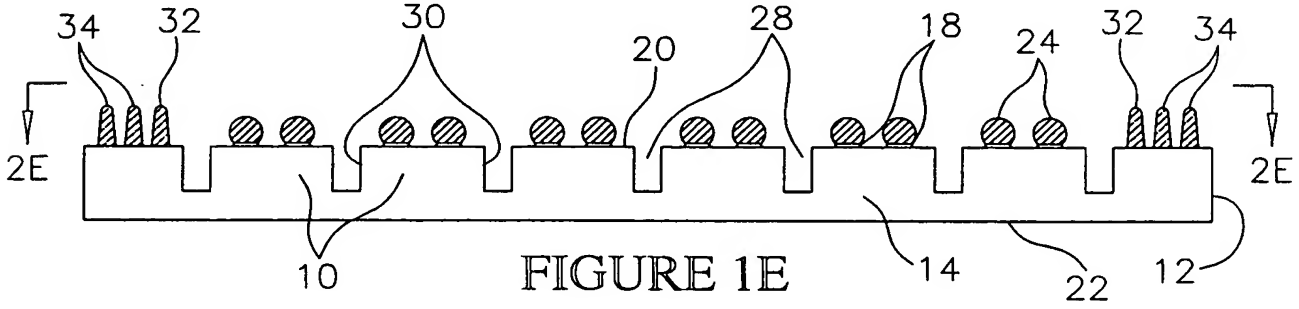


FIGURE 1E

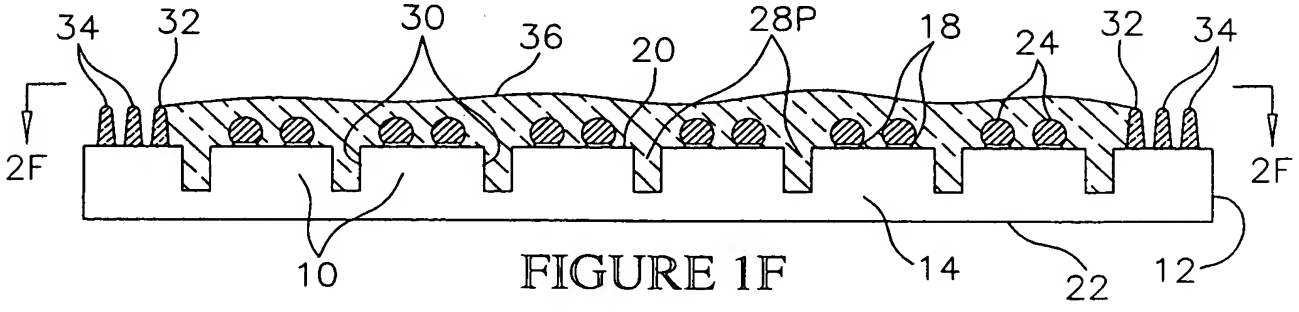


FIGURE 1F

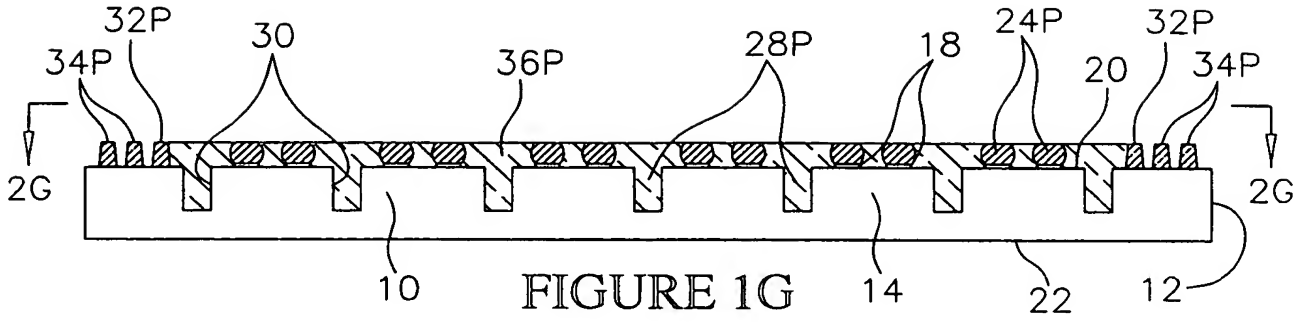


FIGURE 1G

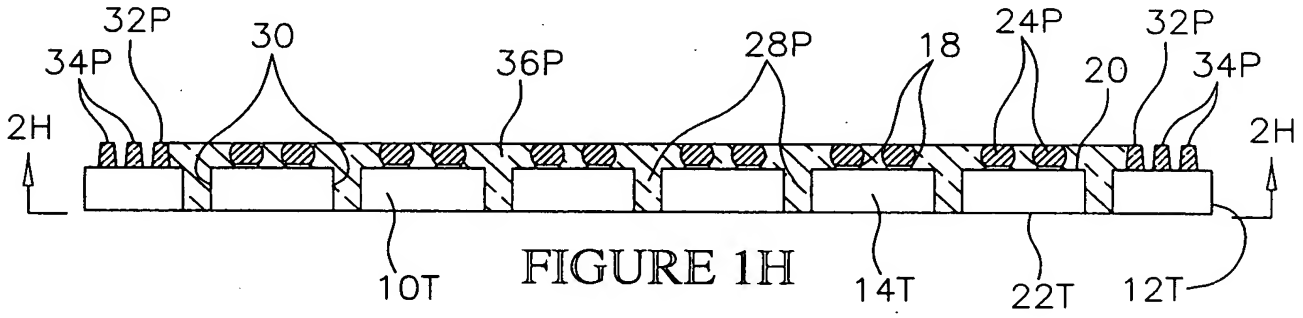


FIGURE 1H

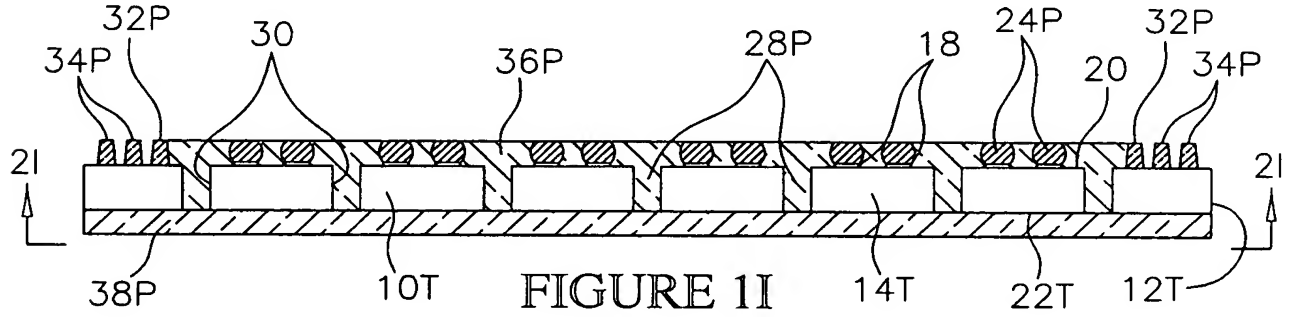


FIGURE 1I

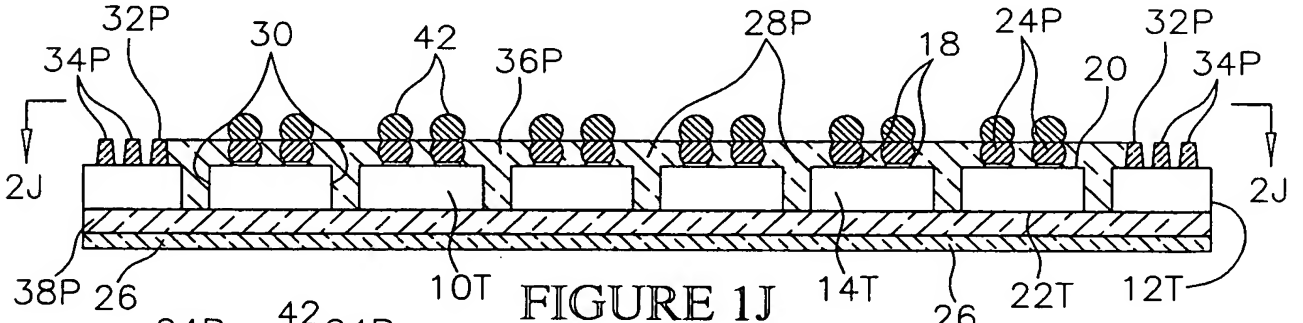


FIGURE 1J

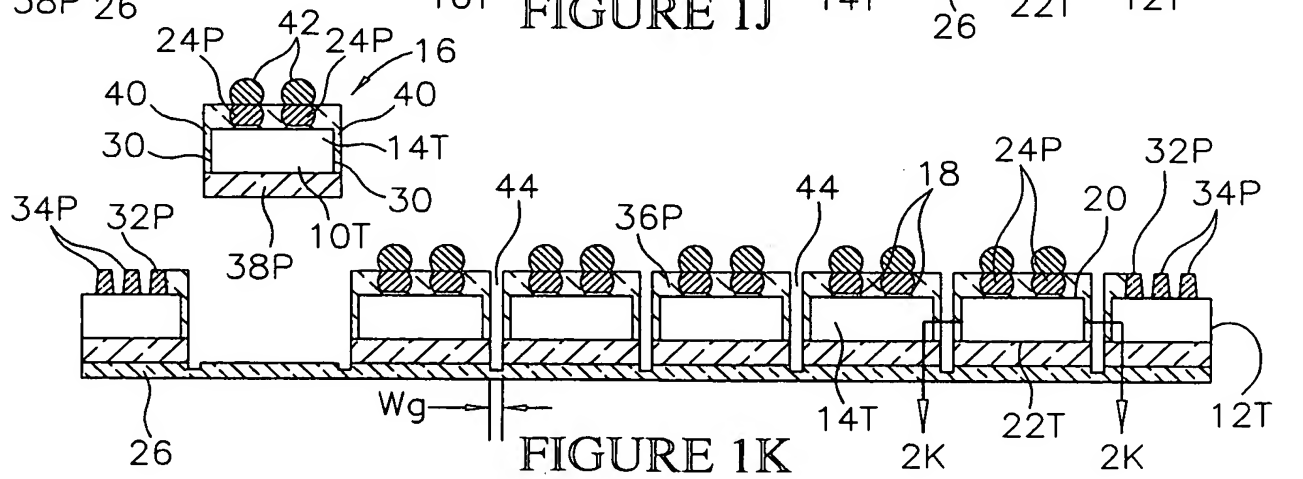


FIGURE 1K

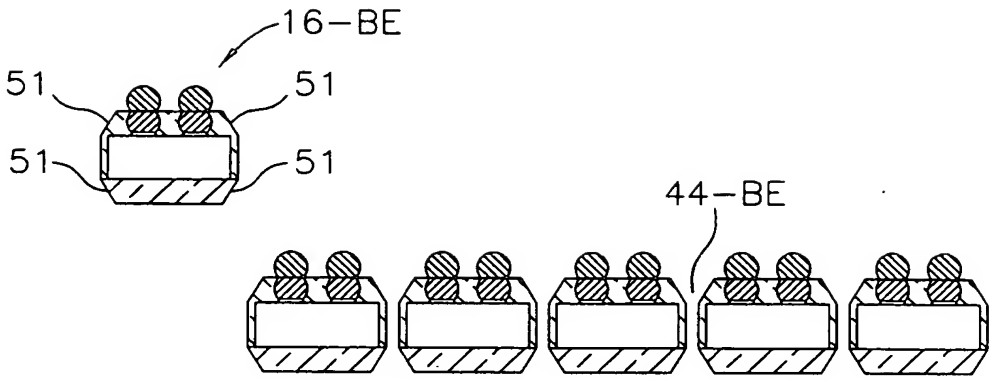


FIGURE 1O

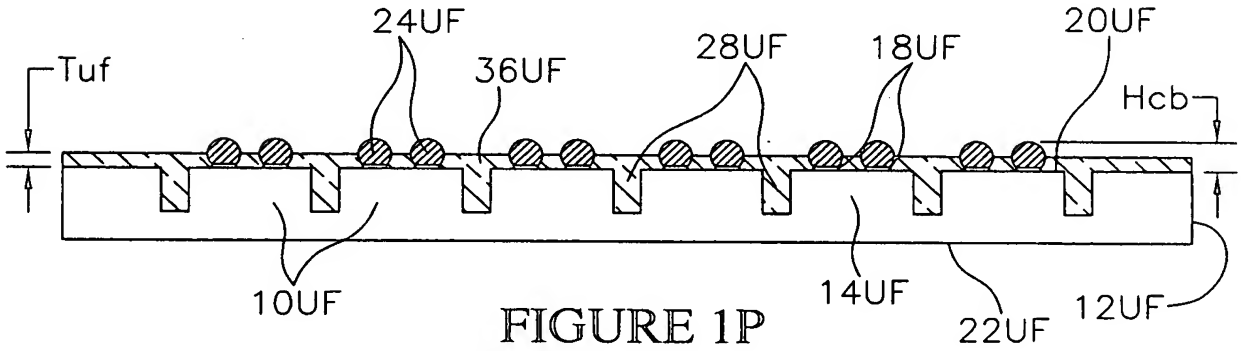


FIGURE 1P

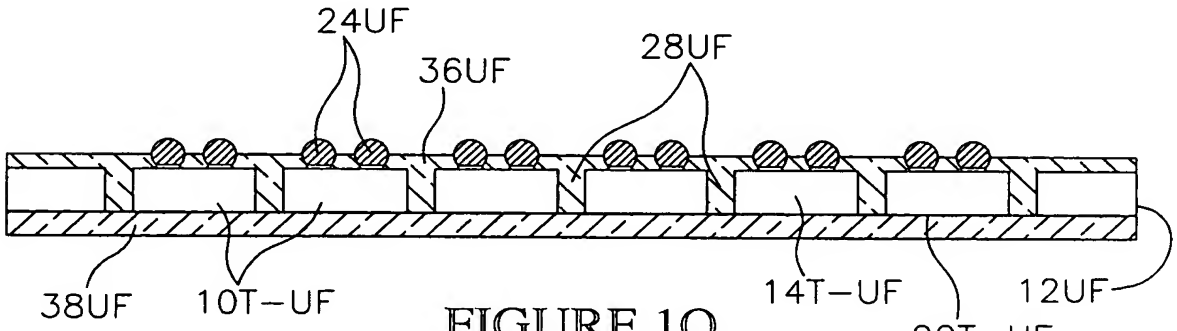


FIGURE 1Q

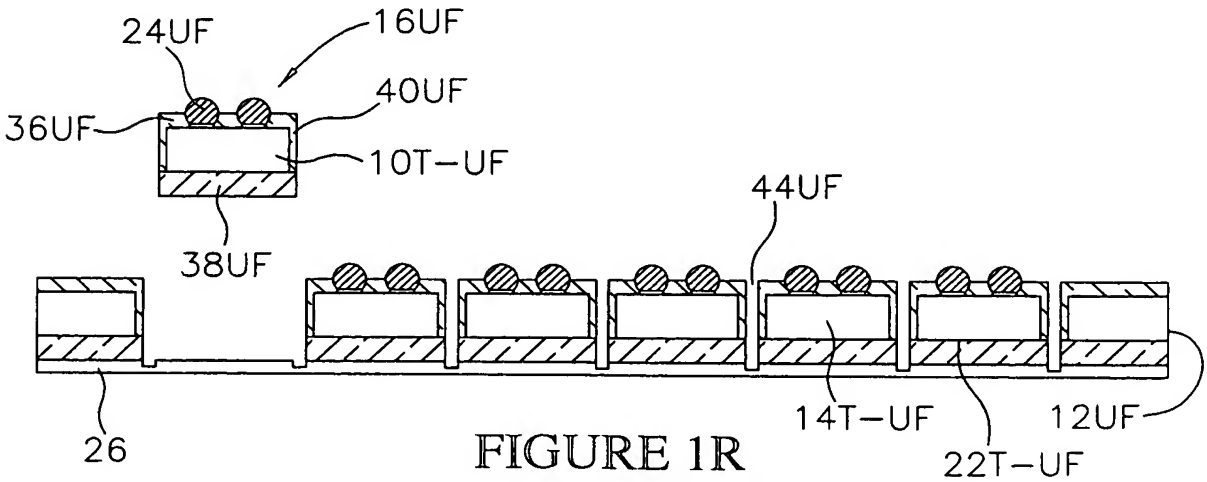


FIGURE 1R

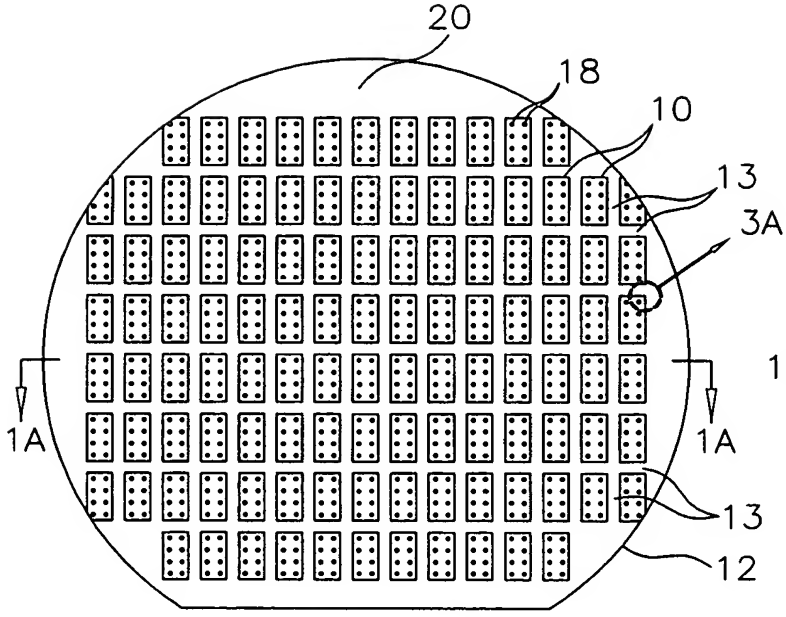


FIGURE 2A

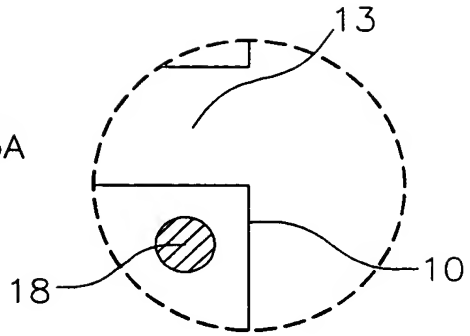


FIGURE 3A

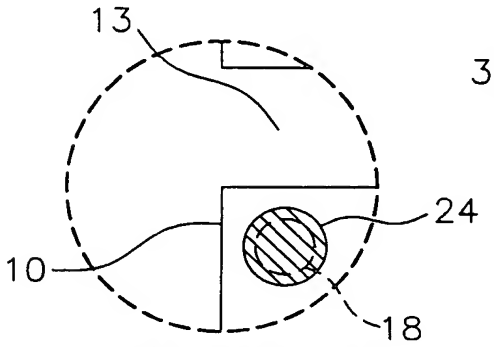


FIGURE 3B

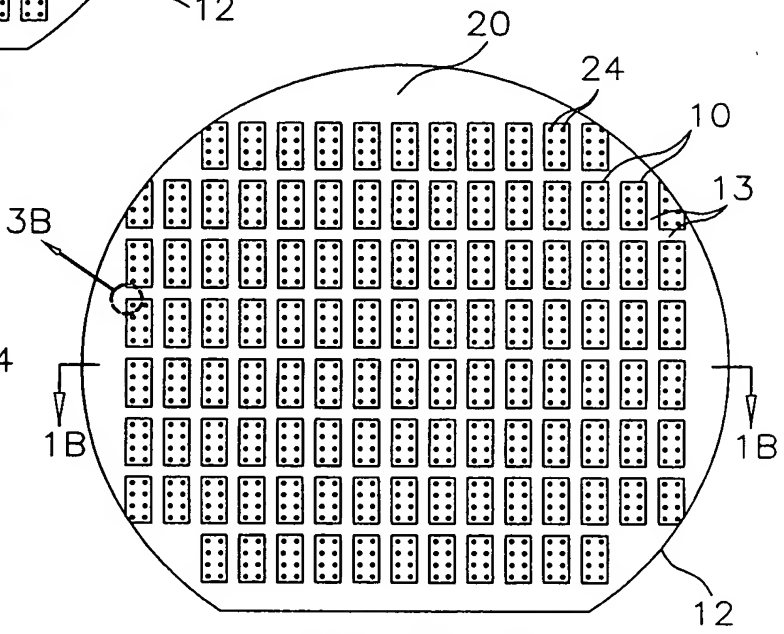


FIGURE 2B

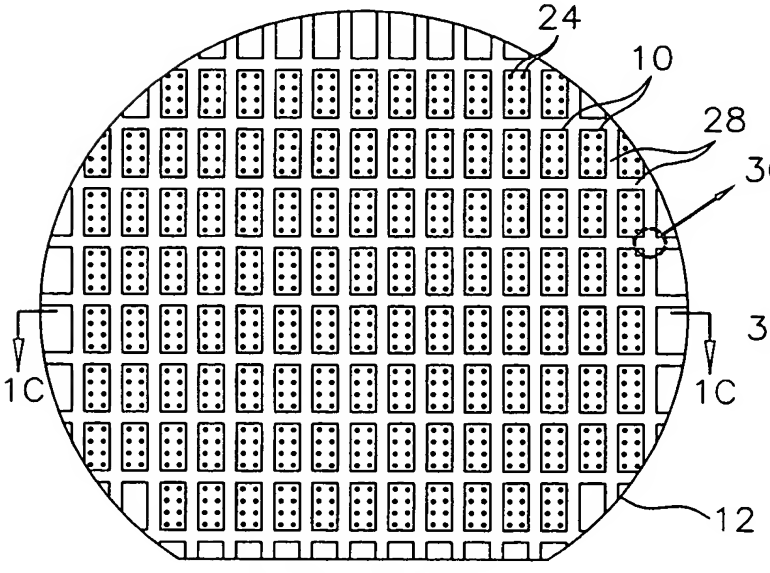


FIGURE 2C

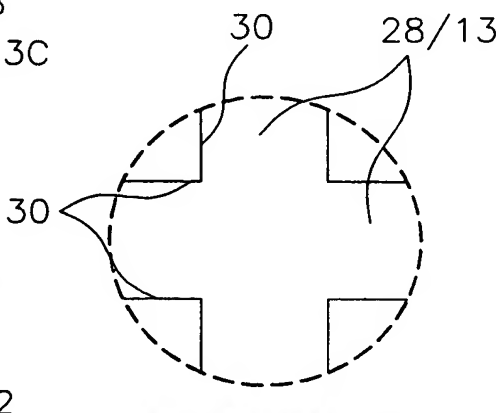


FIGURE 3C

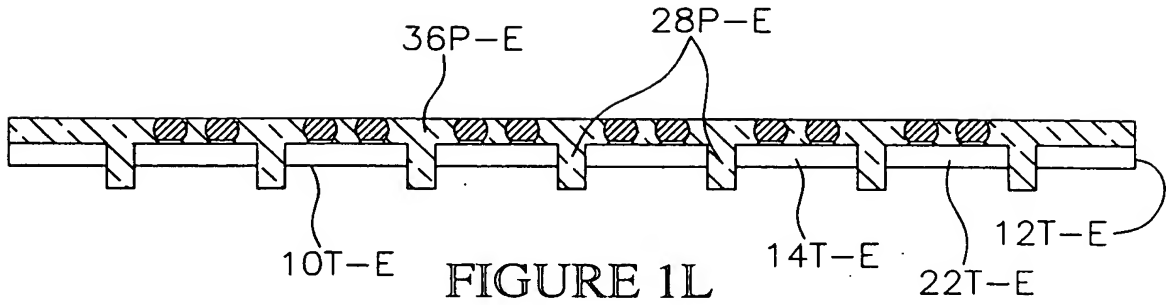


FIGURE 1L

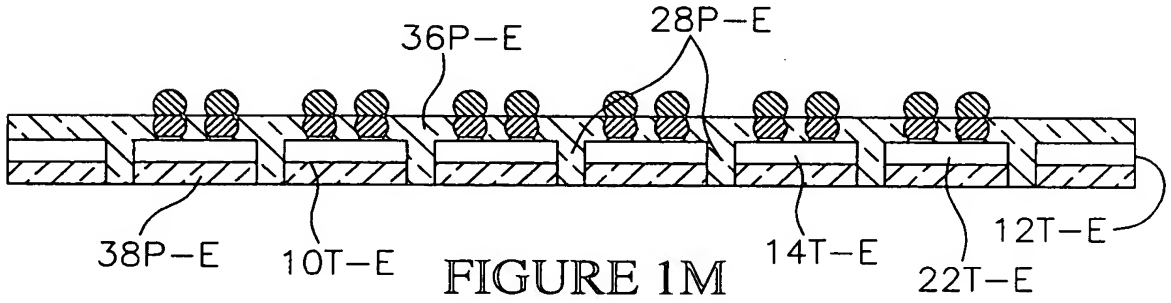


FIGURE 1M

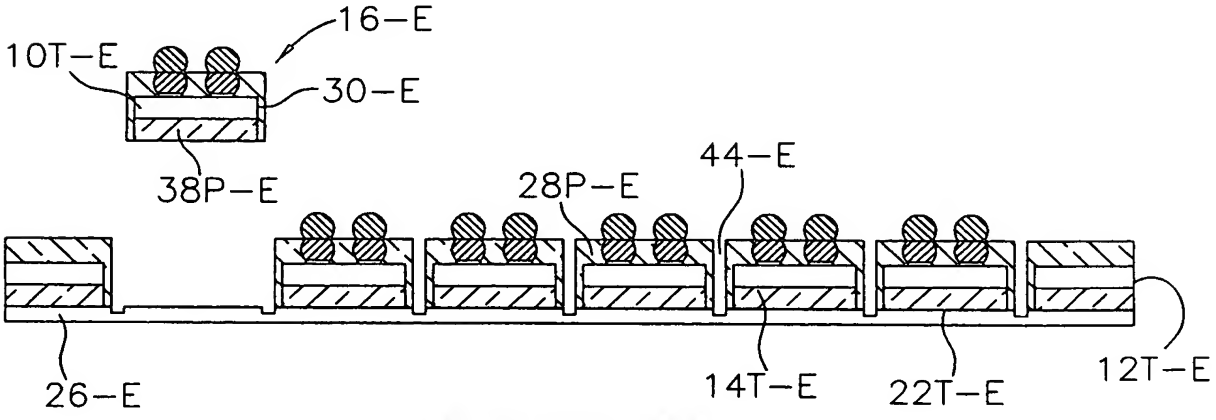


FIGURE 1N

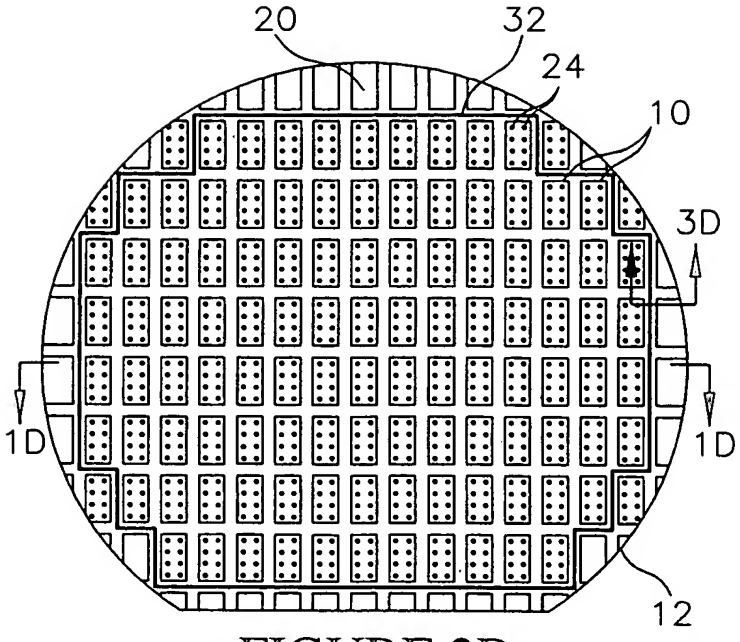


FIGURE 2D

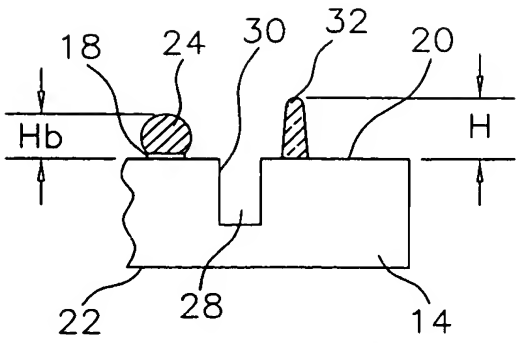


FIGURE 3D

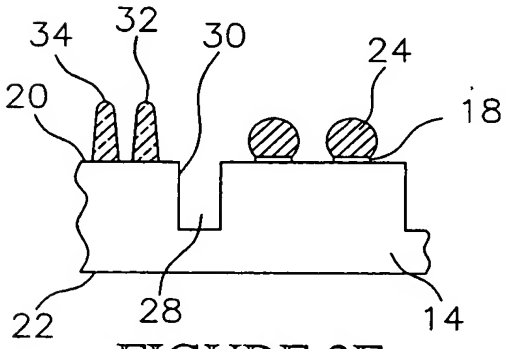


FIGURE 3E

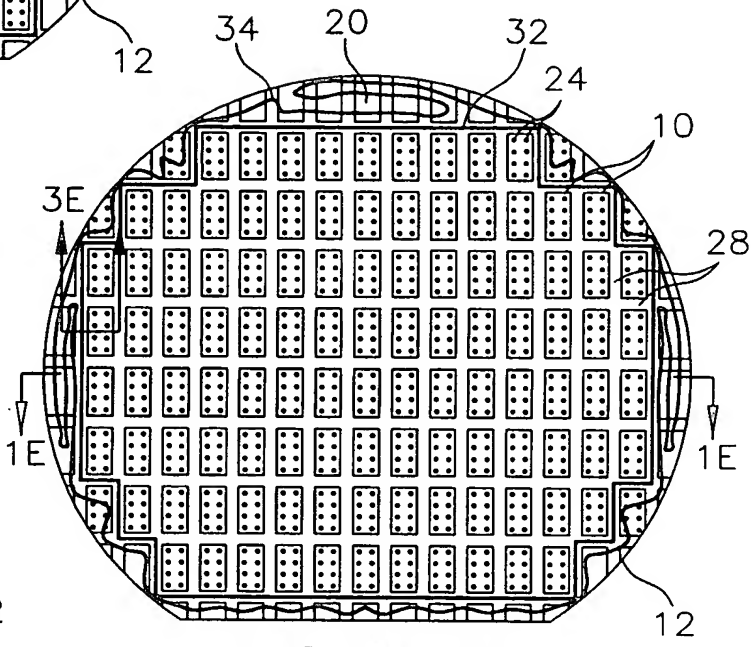


FIGURE 2E

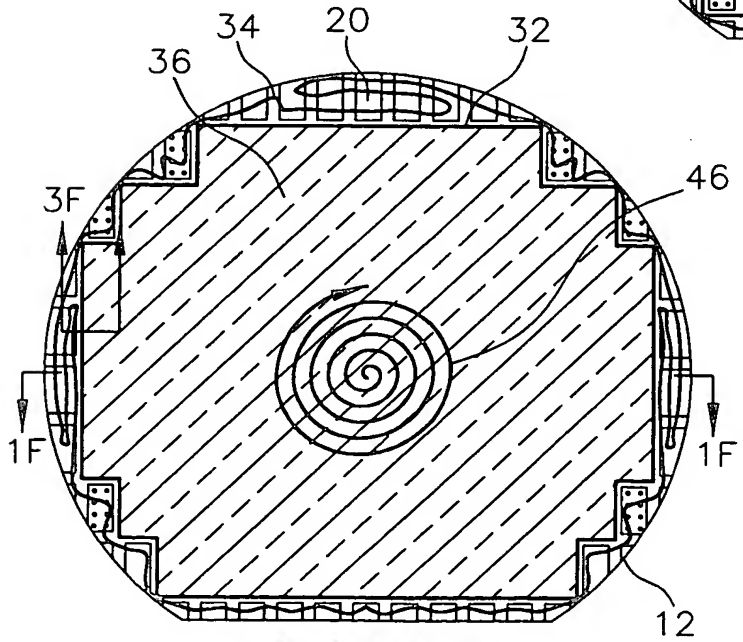


FIGURE 2F

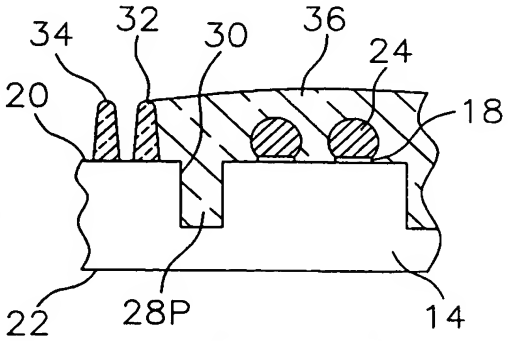


FIGURE 3F

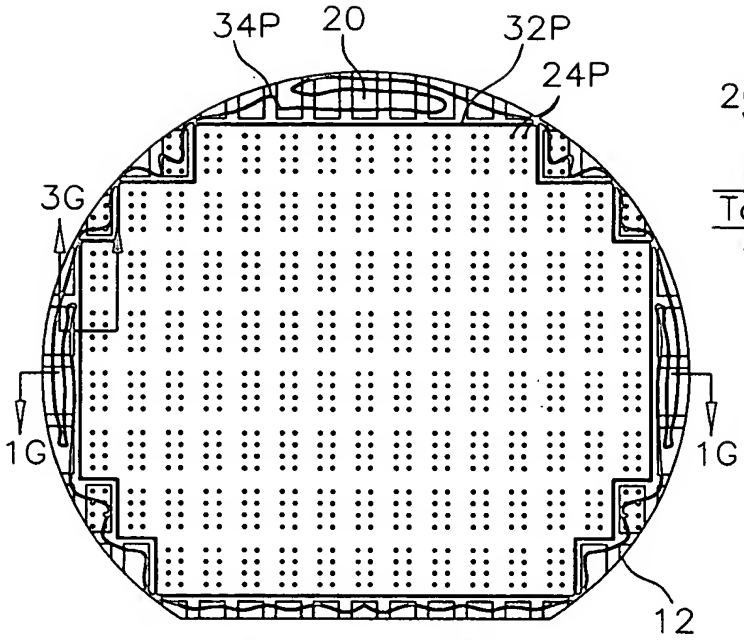


FIGURE 2G

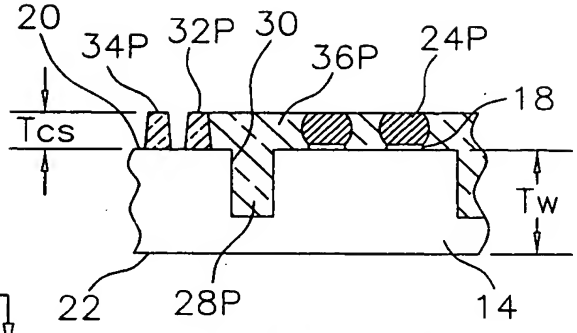


FIGURE 3G

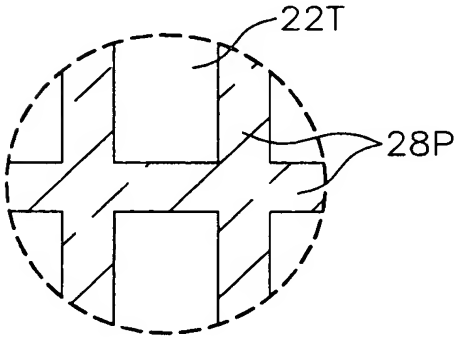


FIGURE 3H

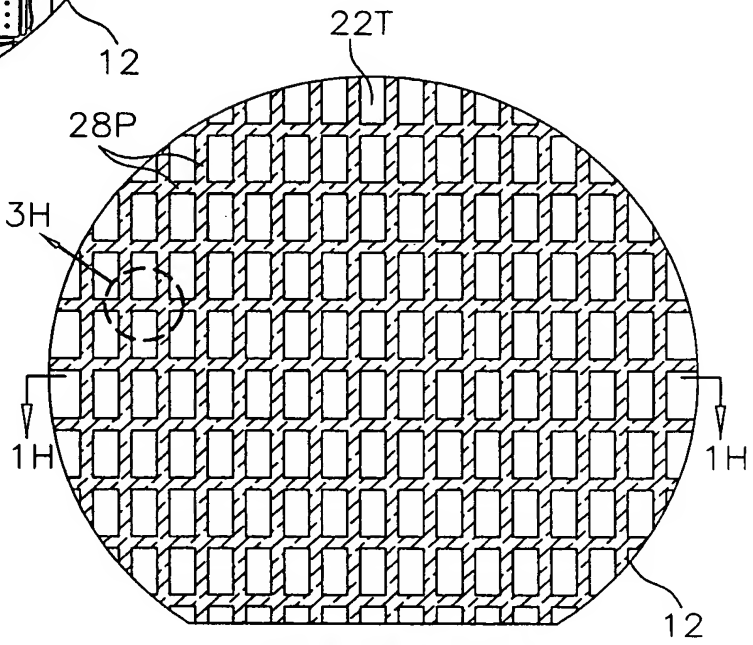


FIGURE 2H

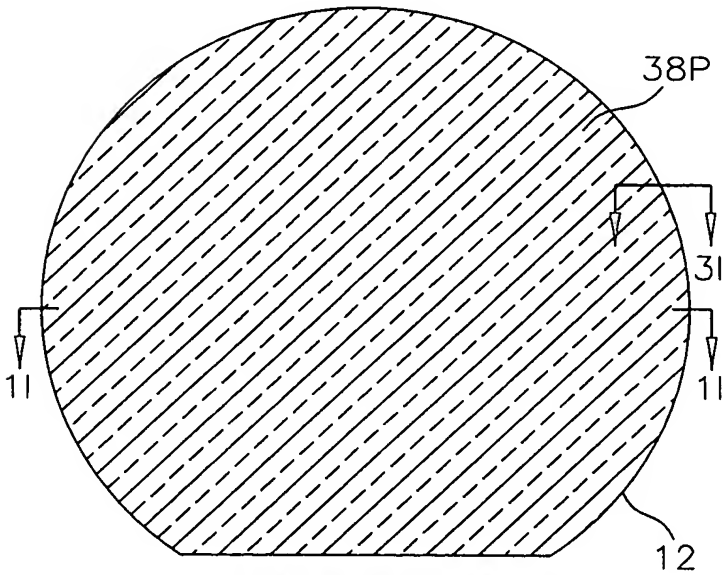


FIGURE 2I

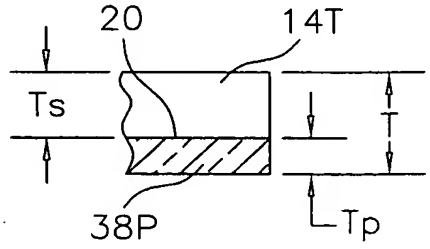


FIGURE 3I

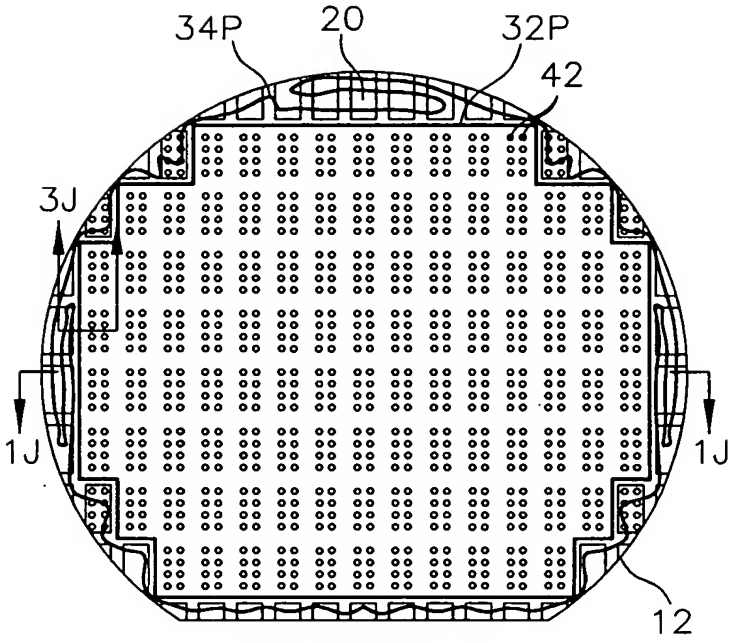


FIGURE 2J

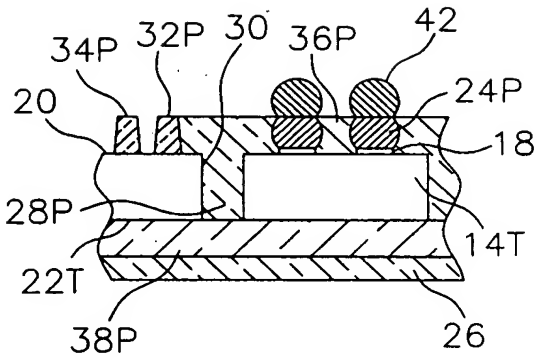


FIGURE 3J

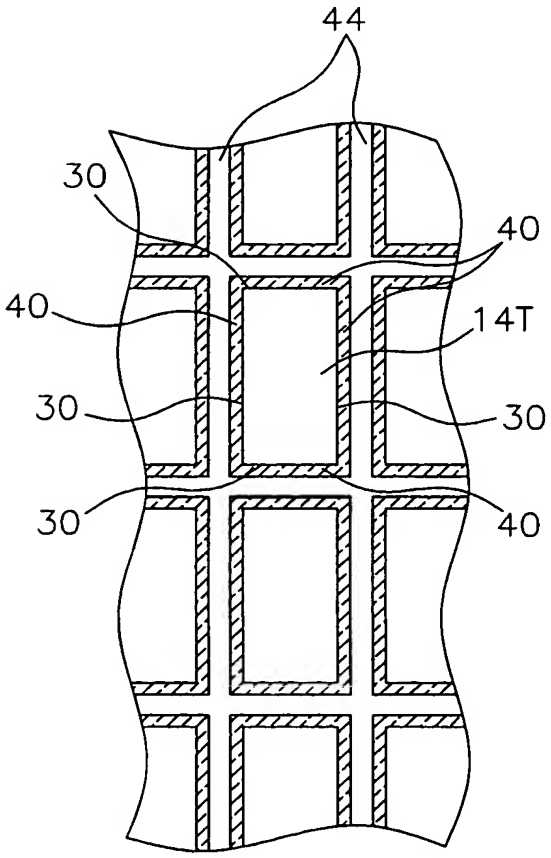


FIGURE 2K

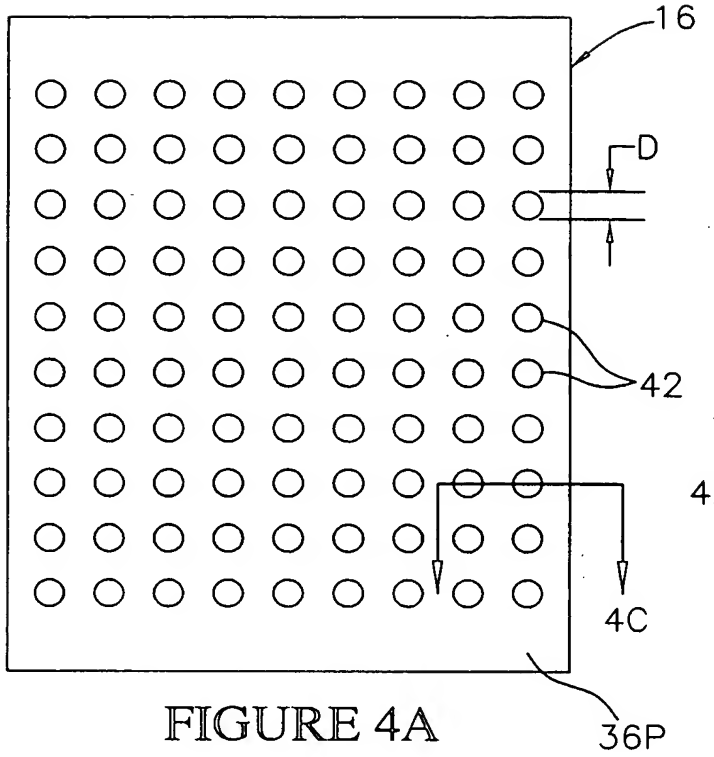


FIGURE 4A

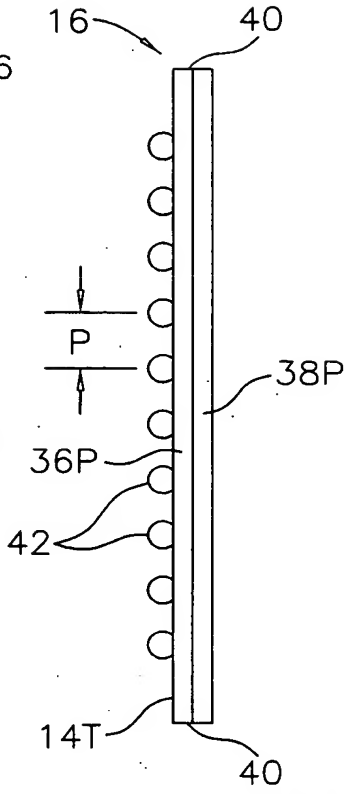


FIGURE 4B

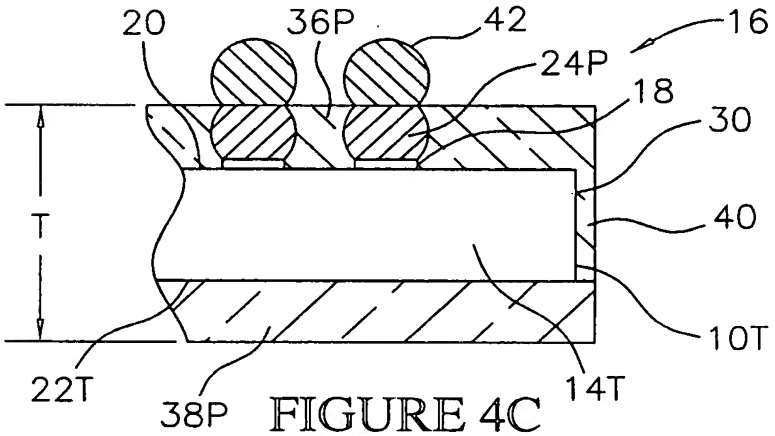


FIGURE 4C

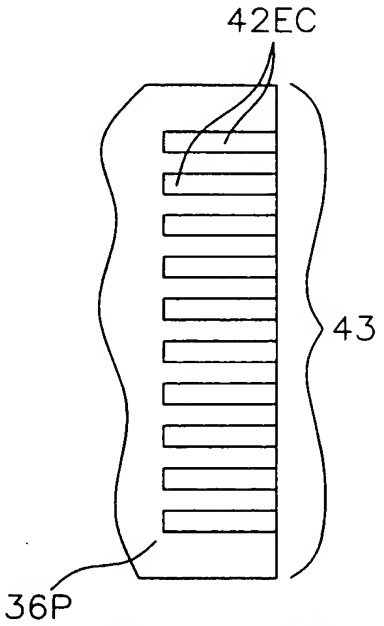


FIGURE 5B

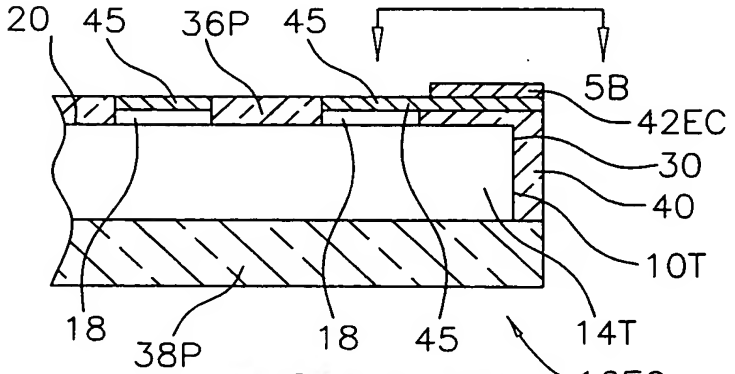


FIGURE 5A

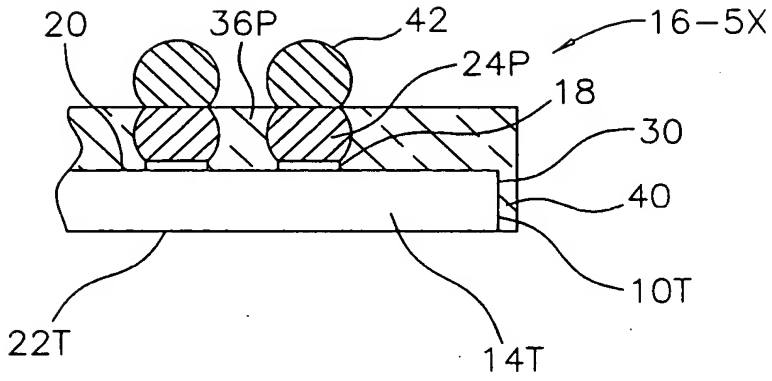


FIGURE 6A

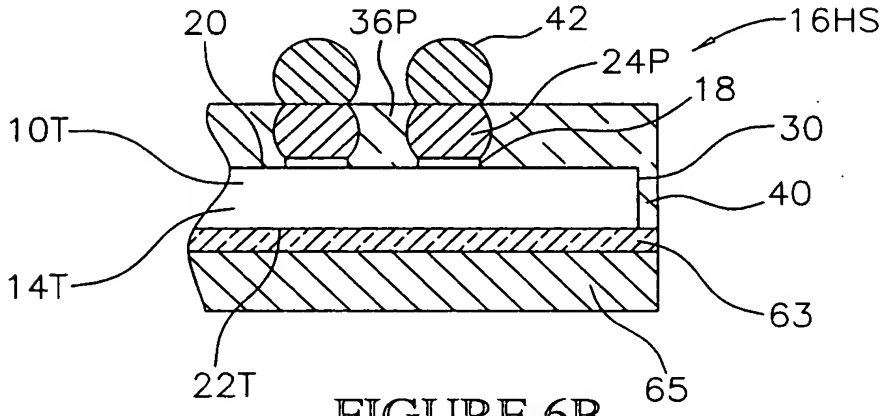


FIGURE 6B

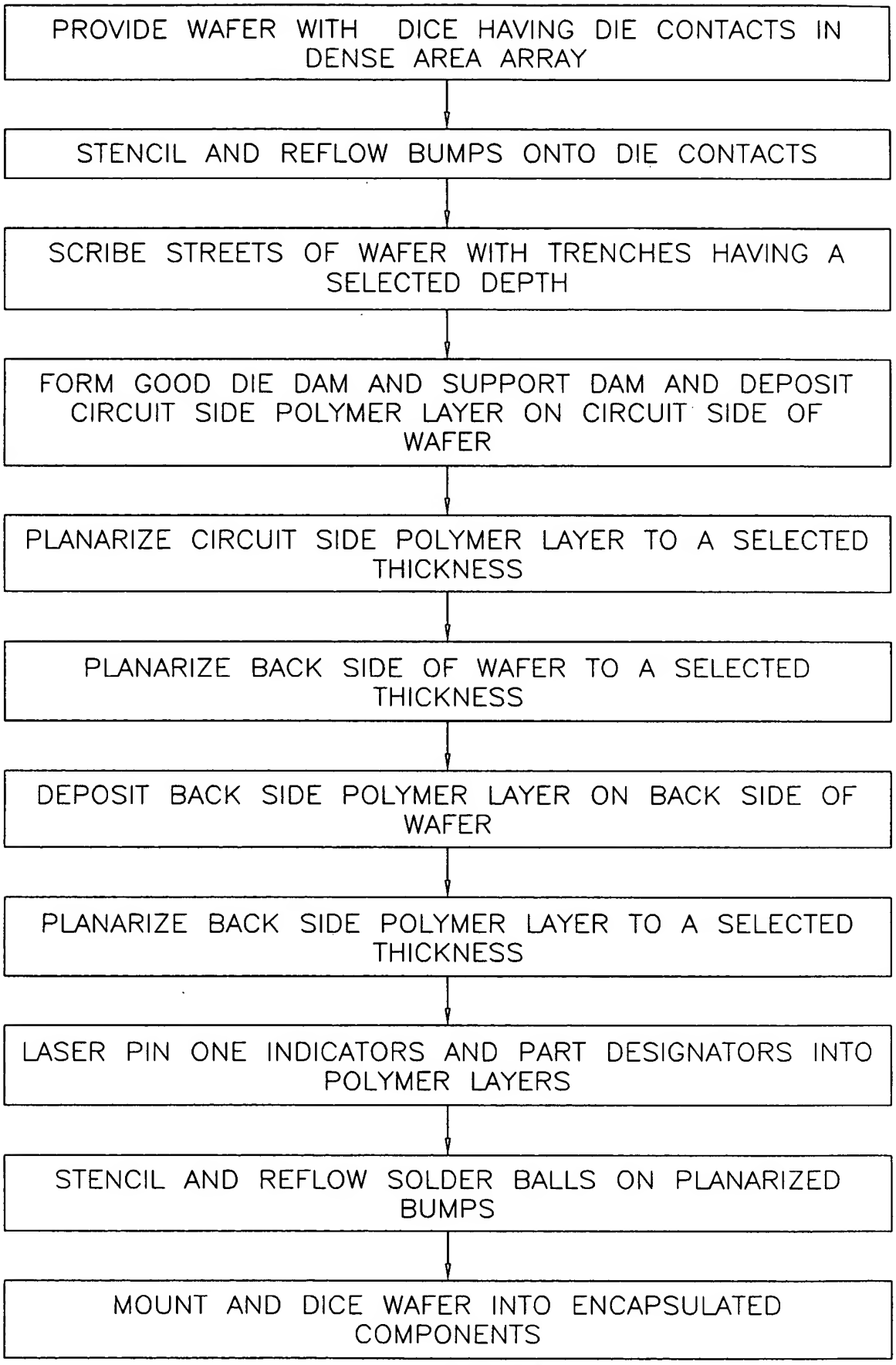

PROVIDE WAFER WITH DICE HAVING DIE CONTACTS IN DENSE AREA ARRAY
STENCIL AND REFLOW BUMPS ONTO DIE CONTACTS
SCRIBE STREETS OF WAFER WITH TRENCHES HAVING A SELECTED DEPTH
FORM GOOD DIE DAM AND SUPPORT DAM AND DEPOSIT CIRCUIT SIDE POLYMER LAYER ON CIRCUIT SIDE OF WAFER
PLANARIZE CIRCUIT SIDE POLYMER LAYER TO A SELECTED THICKNESS
PLANARIZE BACK SIDE OF WAFER TO A SELECTED THICKNESS
DEPOSIT BACK SIDE POLYMER LAYER ON BACK SIDE OF WAFER
PLANARIZE BACK SIDE POLYMER LAYER TO A SELECTED THICKNESS
LASER PIN ONE INDICATORS AND PART DESIGNATORS INTO POLYMER LAYERS
STENCIL AND REFLOW SOLDER BALLS ON PLANARIZED BUMPS
MOUNT AND DICE WAFER INTO ENCAPSULATED COMPONENTS

FIGURE 7

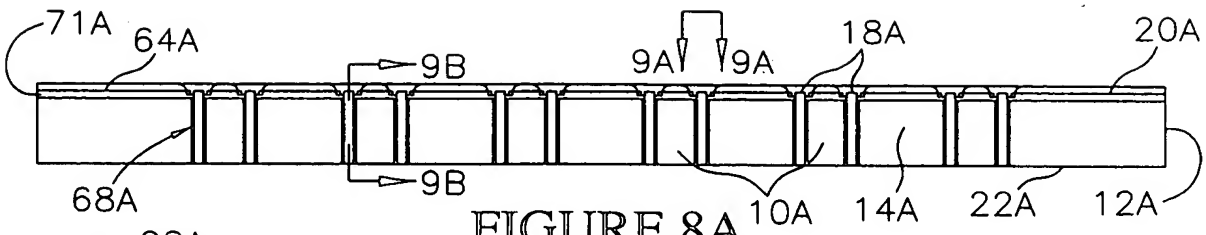


FIGURE 8A

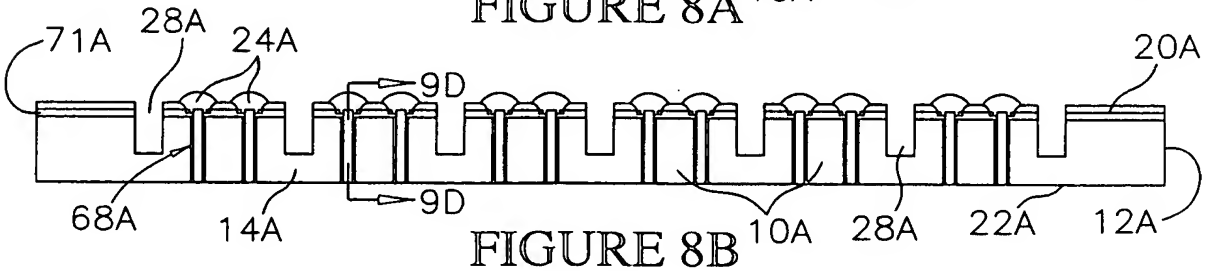


FIGURE 8B

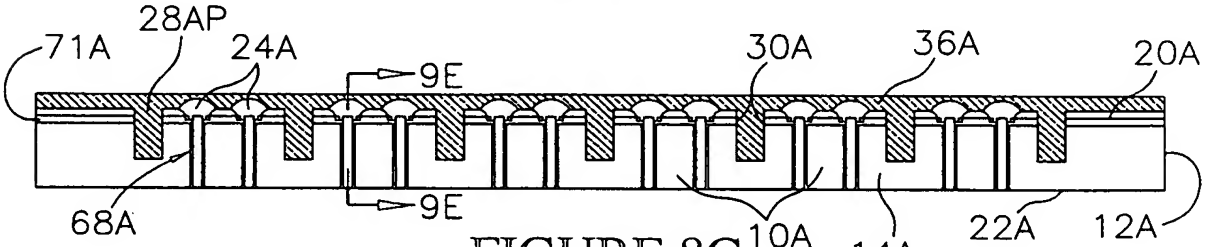


FIGURE 8C

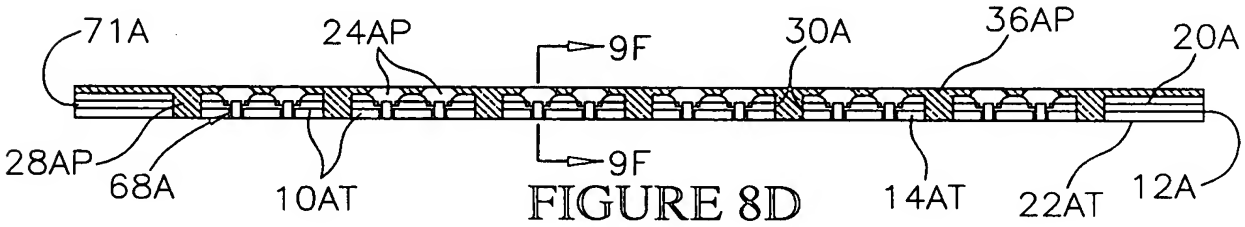


FIGURE 8D

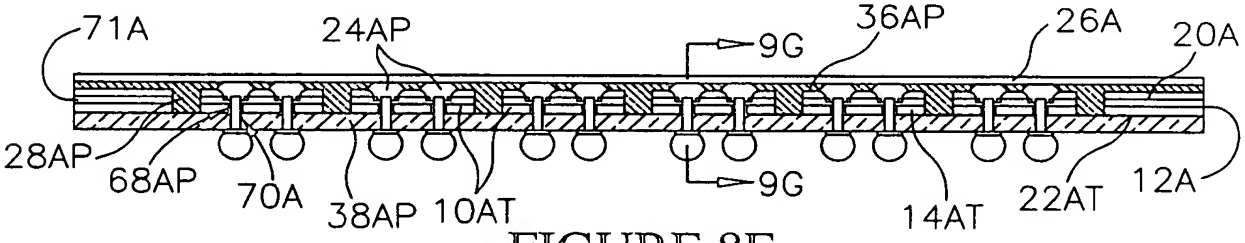


FIGURE 8E

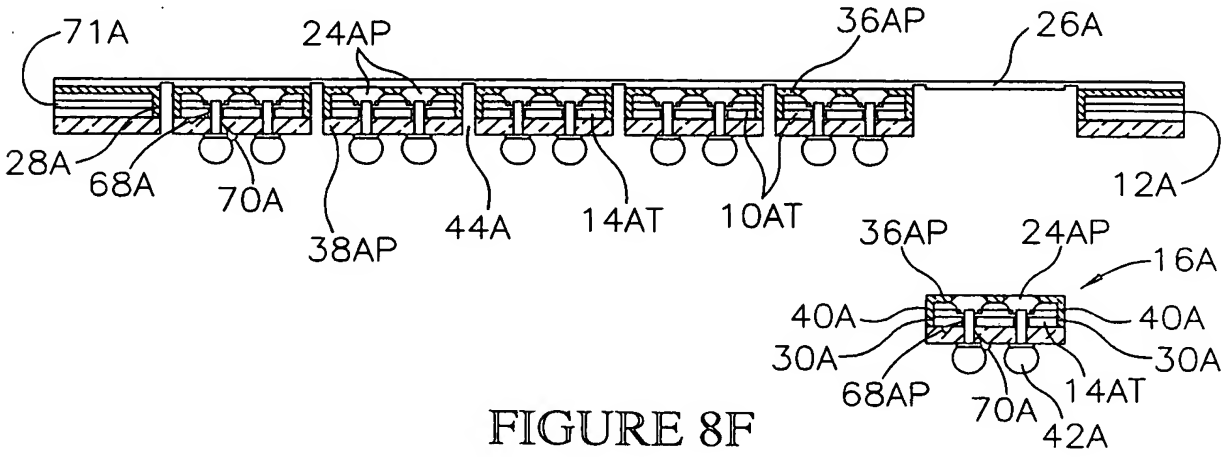


FIGURE 8F

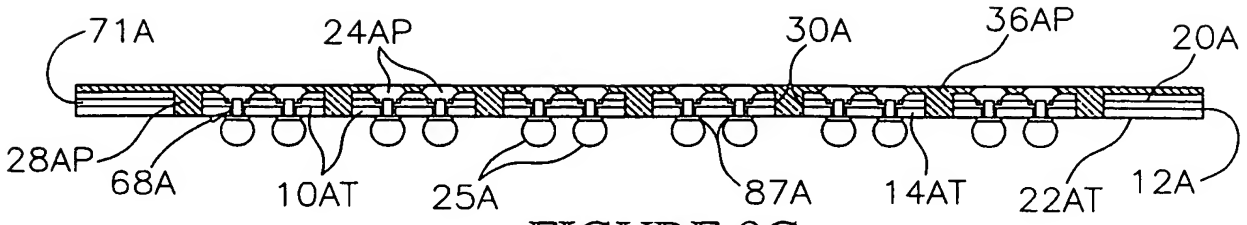


FIGURE 8G

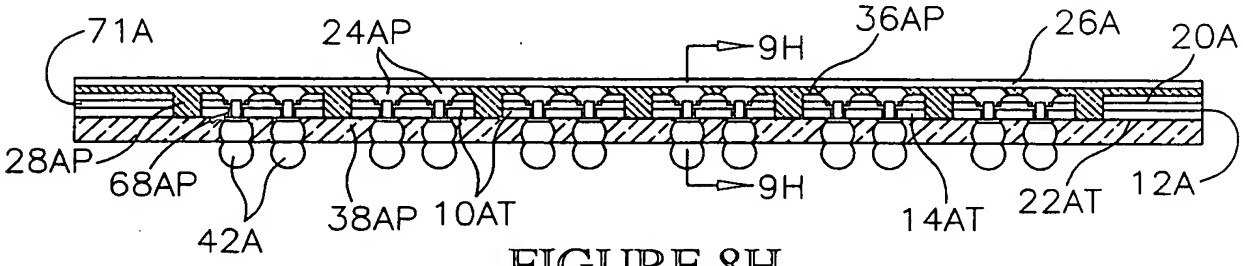
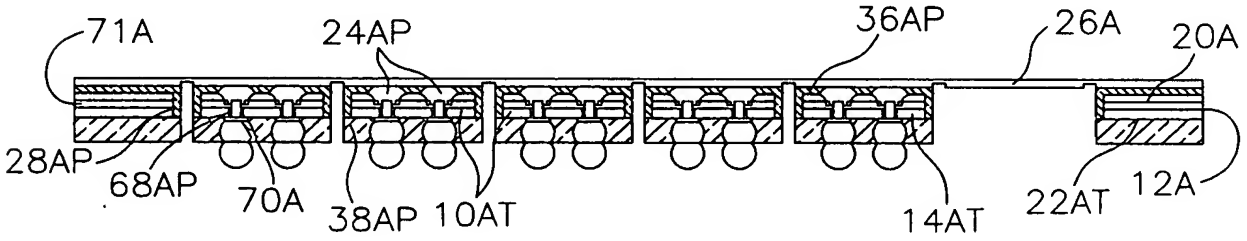


FIGURE 8H



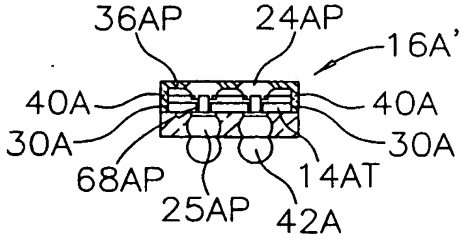


FIGURE 8I

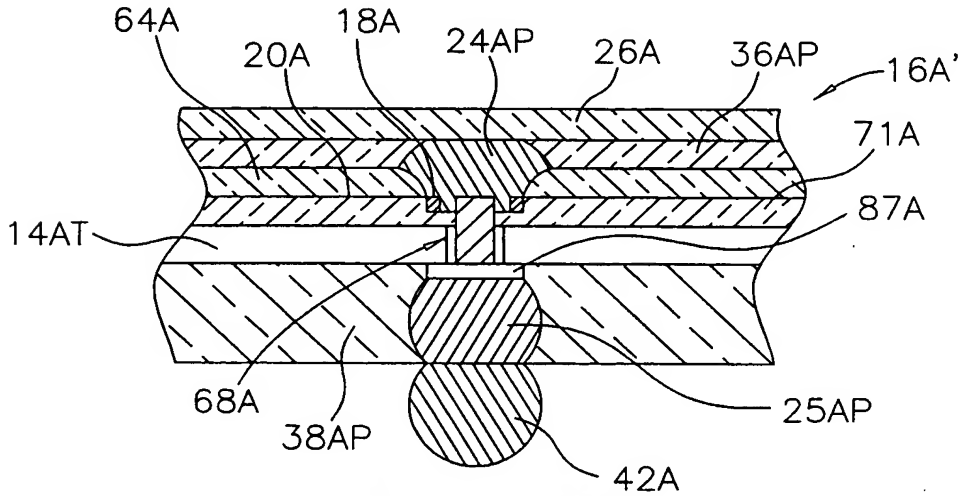


FIGURE 9H

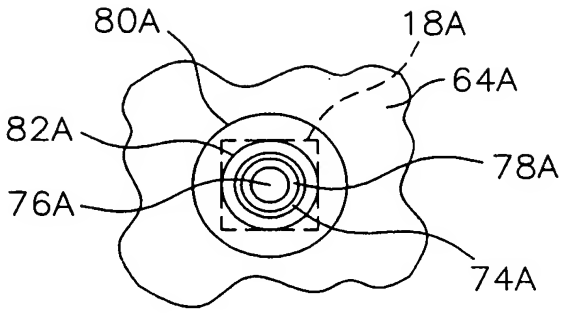


FIGURE 9A

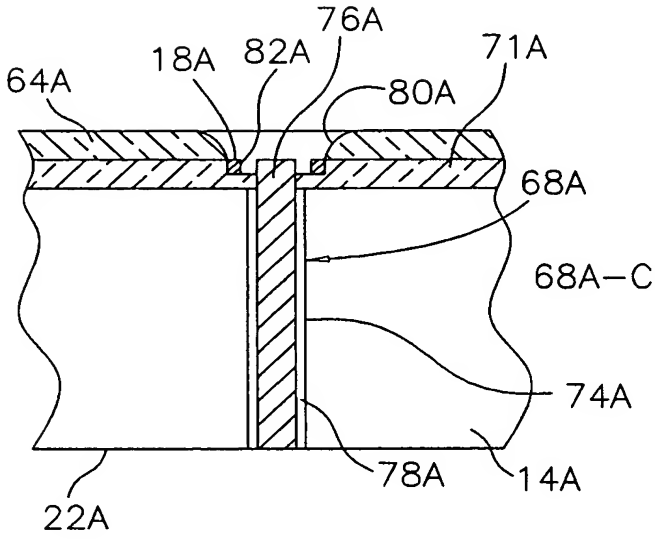


FIGURE 9B

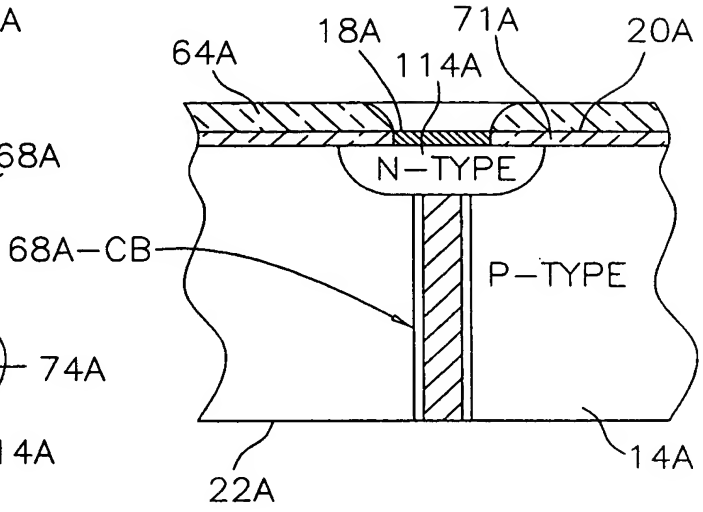


FIGURE 9C

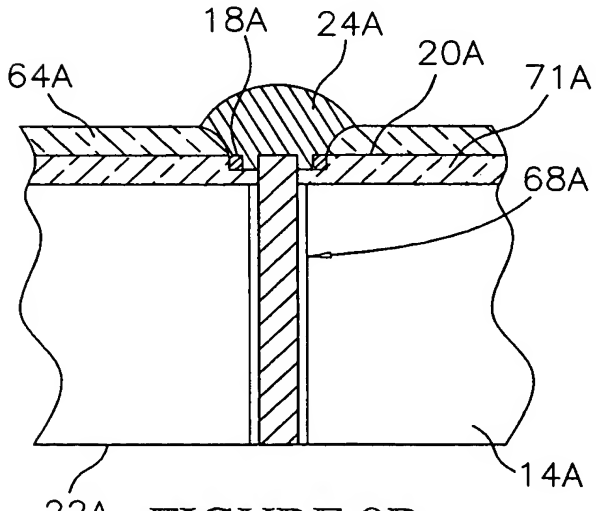


FIGURE 9D

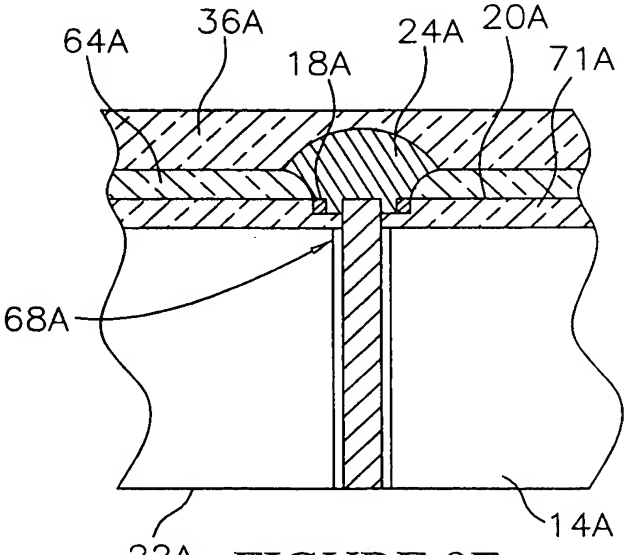


FIGURE 9E

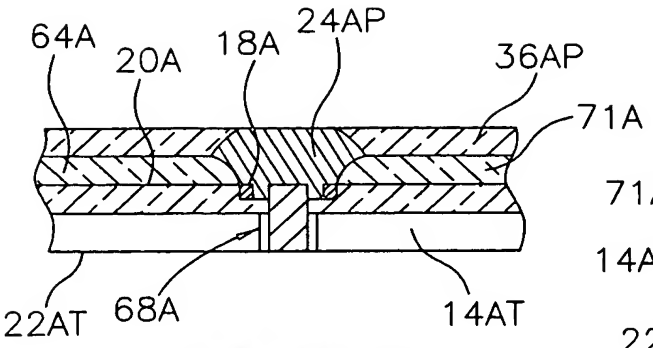


FIGURE 9F

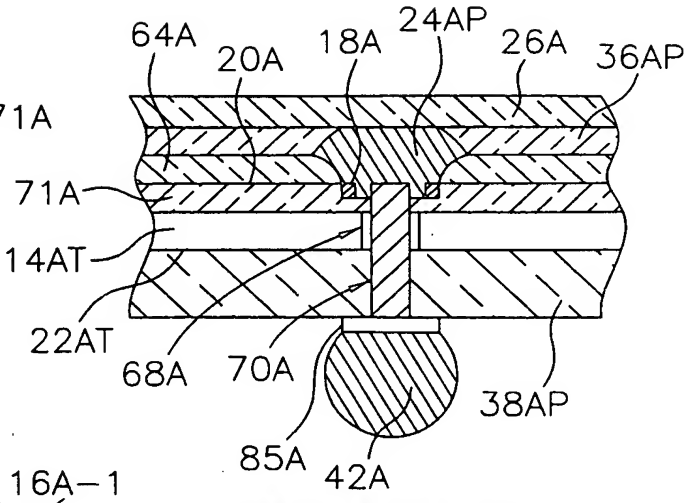


FIGURE 9G

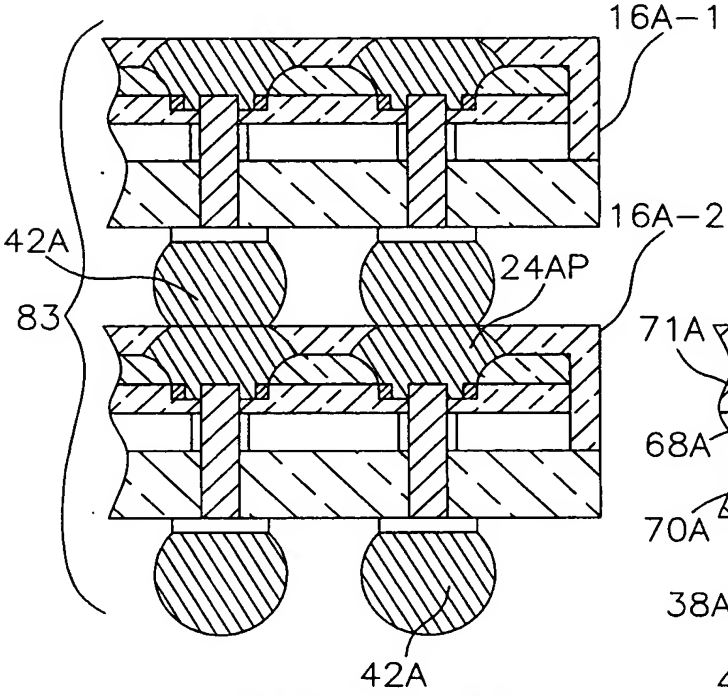


FIGURE 10B

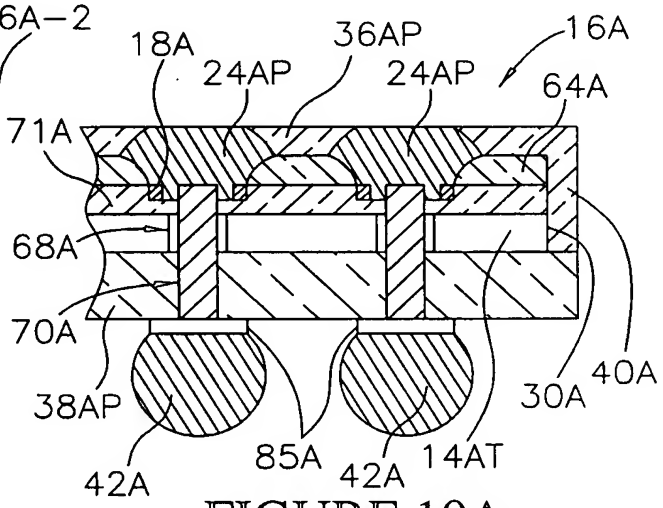


FIGURE 10A

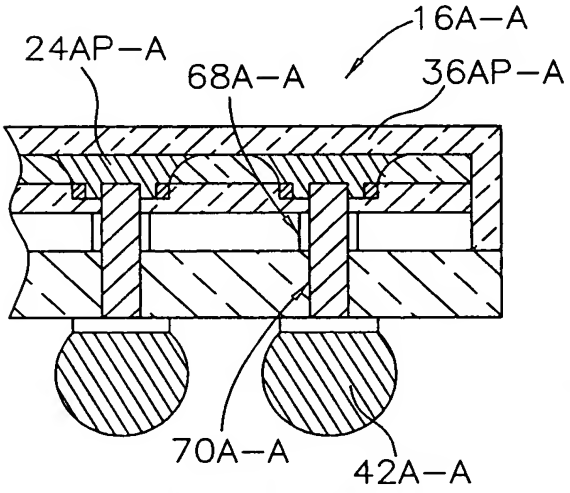


FIGURE 11A

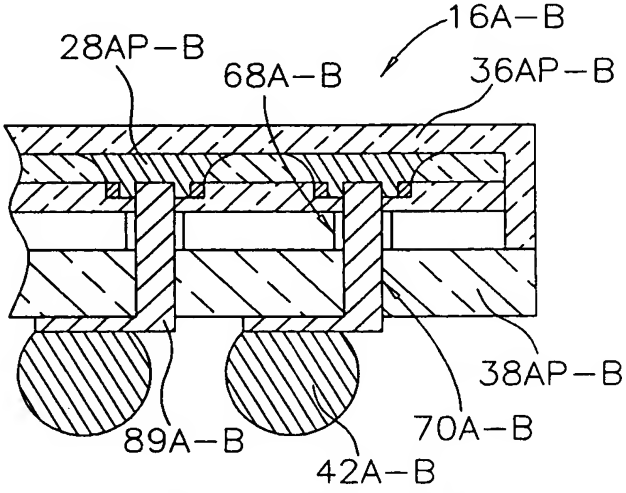


FIGURE 11B

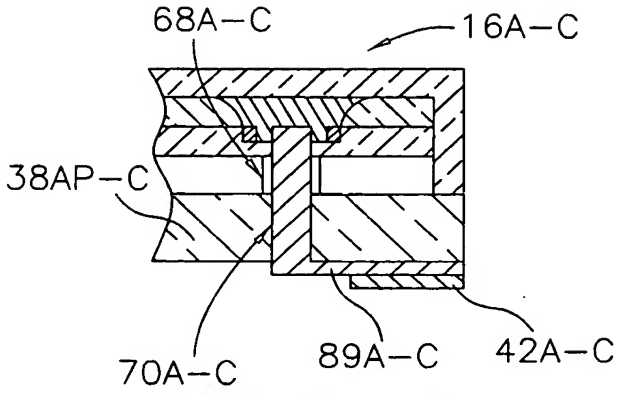


FIGURE 11C

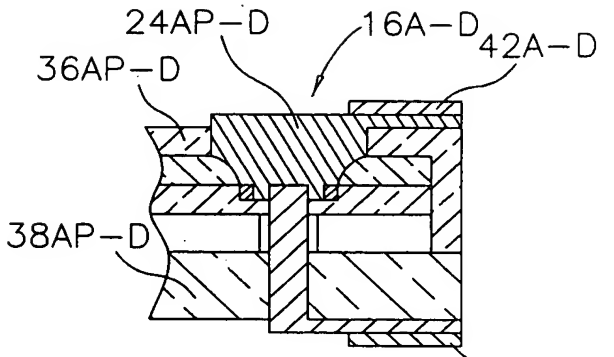


FIGURE 11D

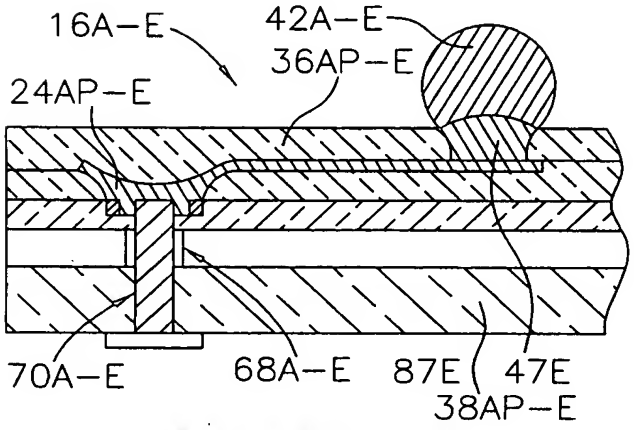


FIGURE 11E

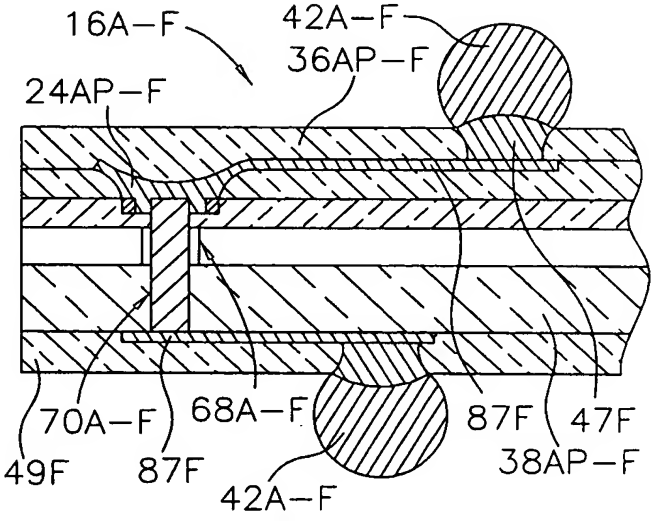


FIGURE 11F

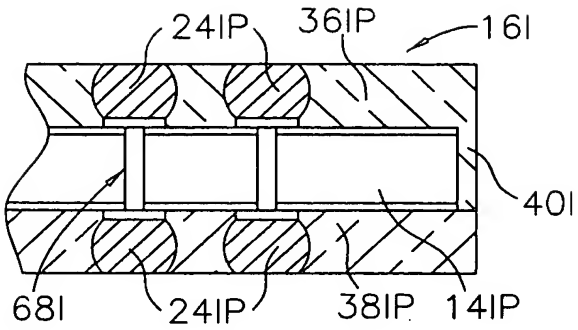


FIGURE 12A

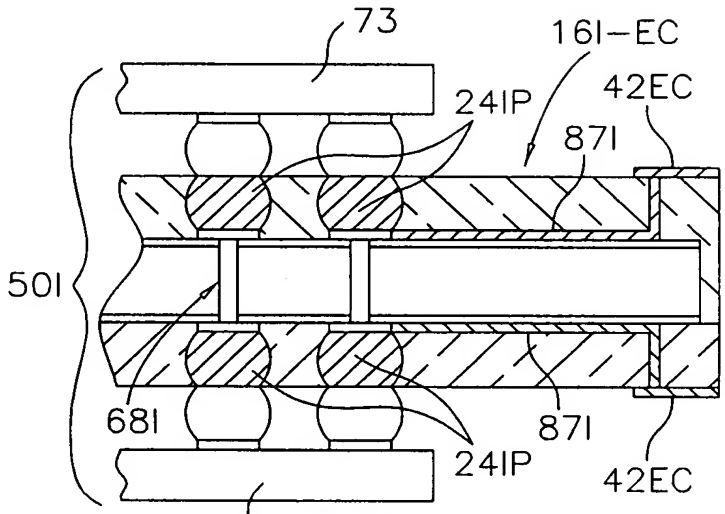


FIGURE 12B

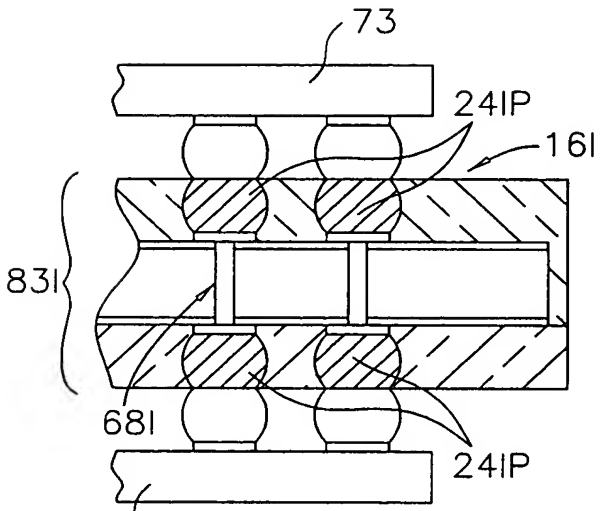


FIGURE 12C

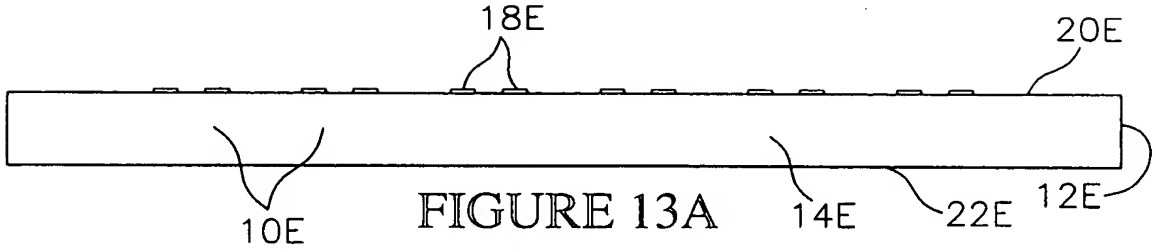


FIGURE 13A

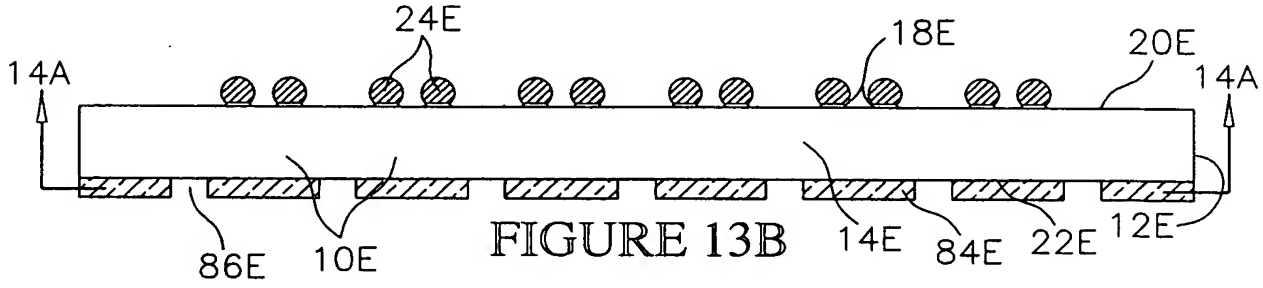


FIGURE 13B

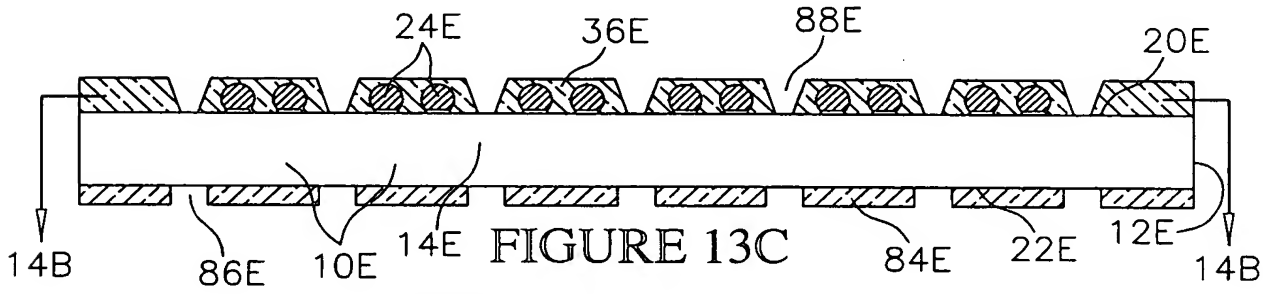


FIGURE 13C

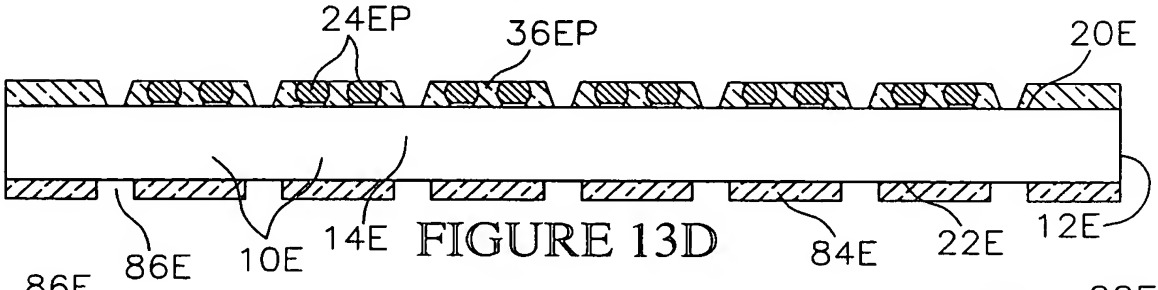


FIGURE 13D

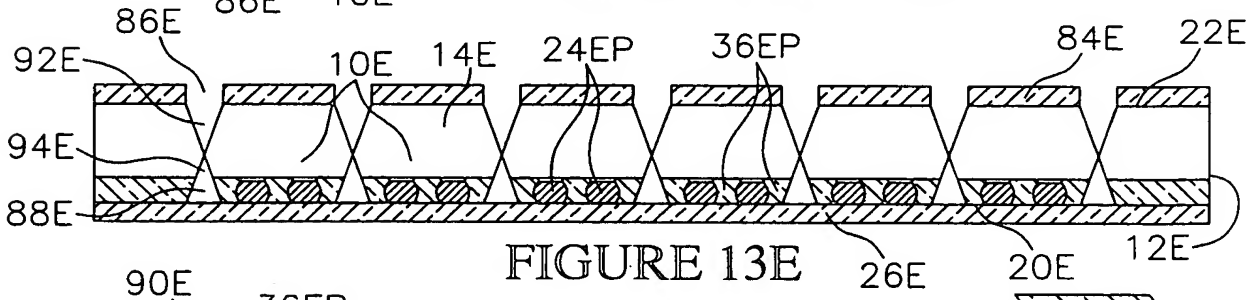
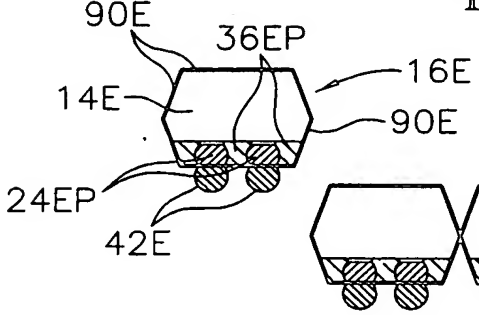


FIGURE 13E



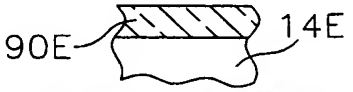


FIGURE 13G

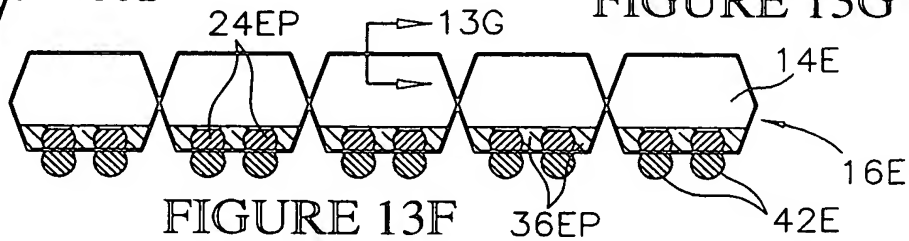


FIGURE 13F

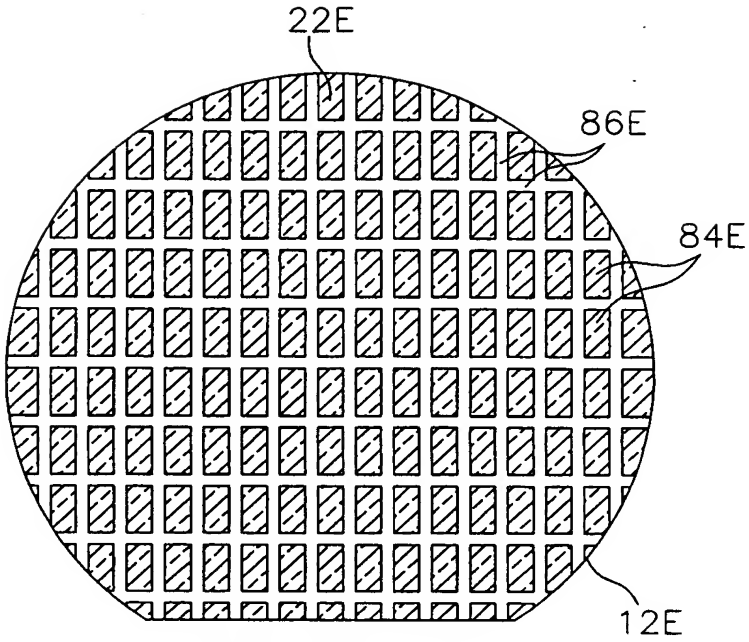


FIGURE 14A

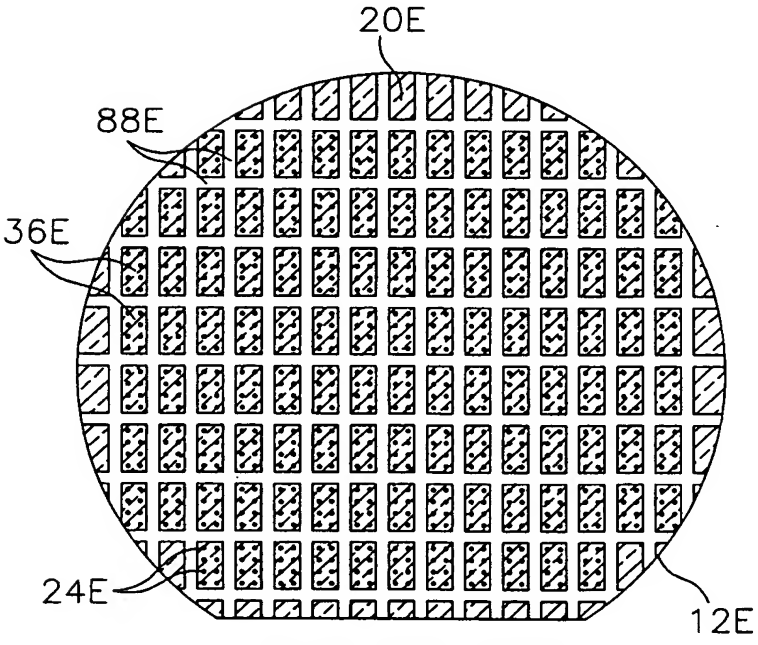


FIGURE 14B

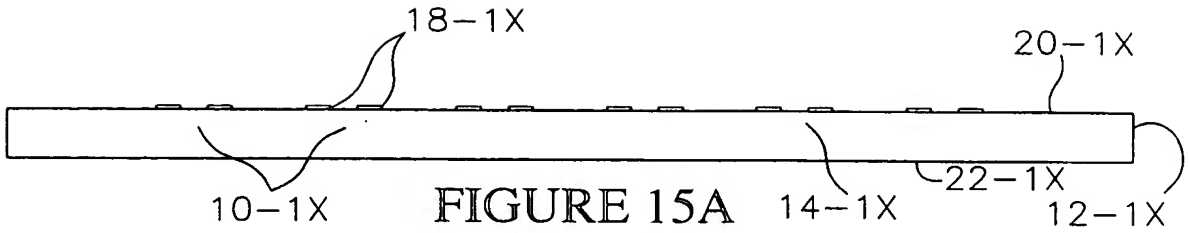


FIGURE 15A

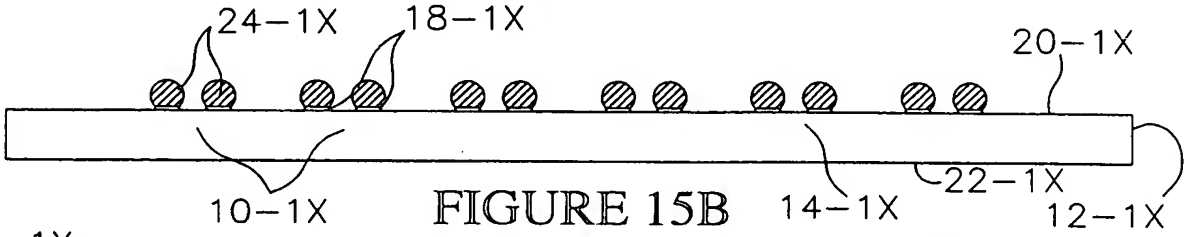


FIGURE 15B

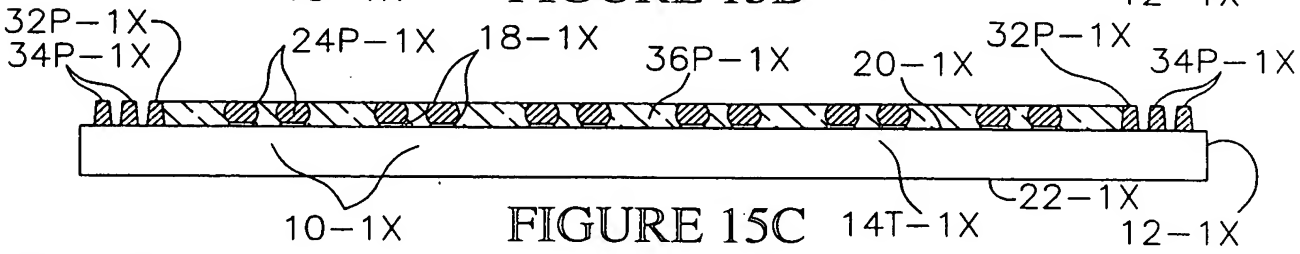


FIGURE 15C

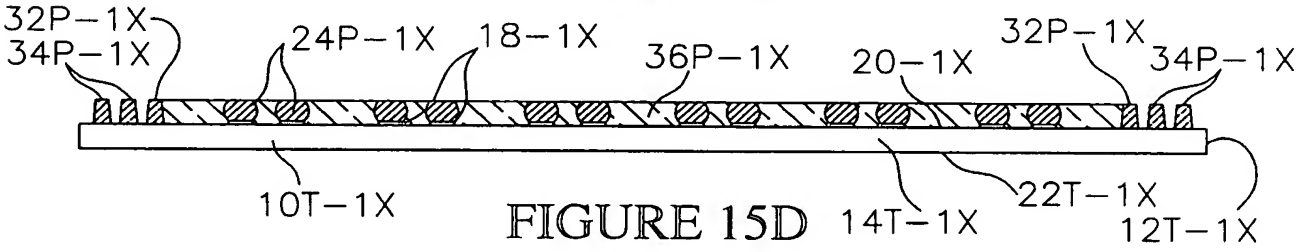


FIGURE 15D

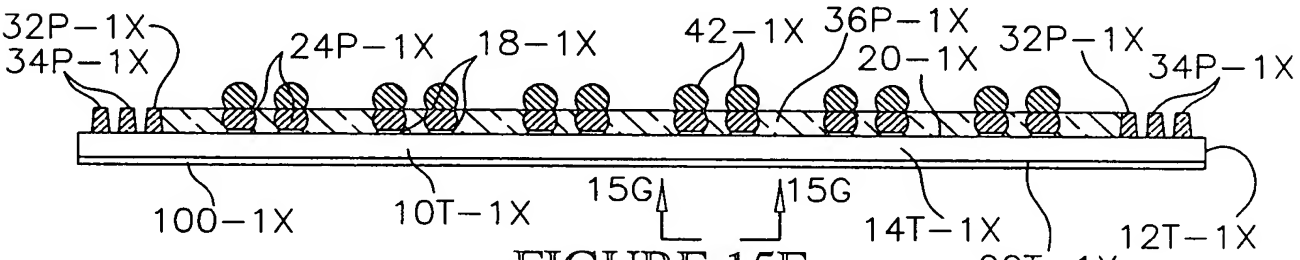


FIGURE 15E

FIGURE 15G

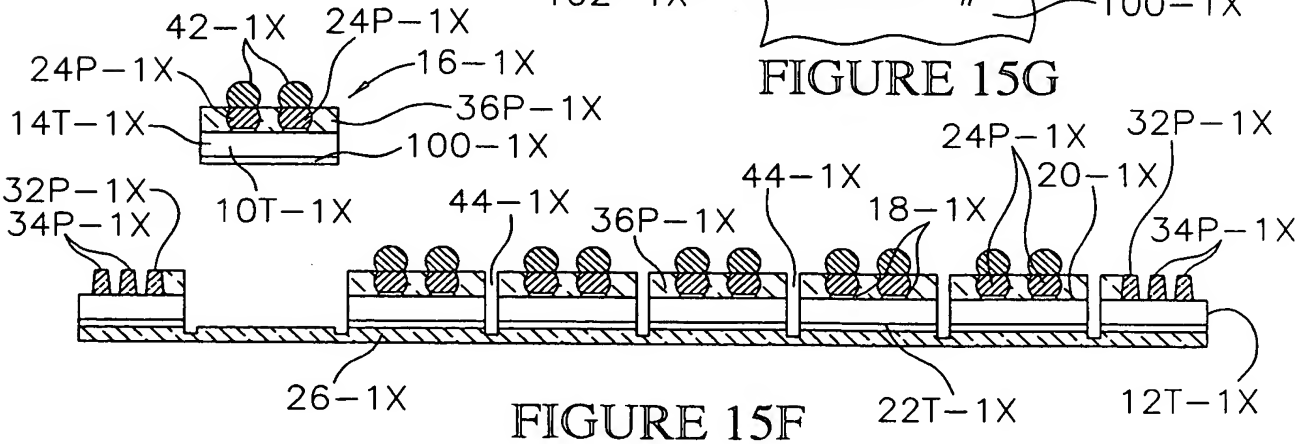


FIGURE 15F

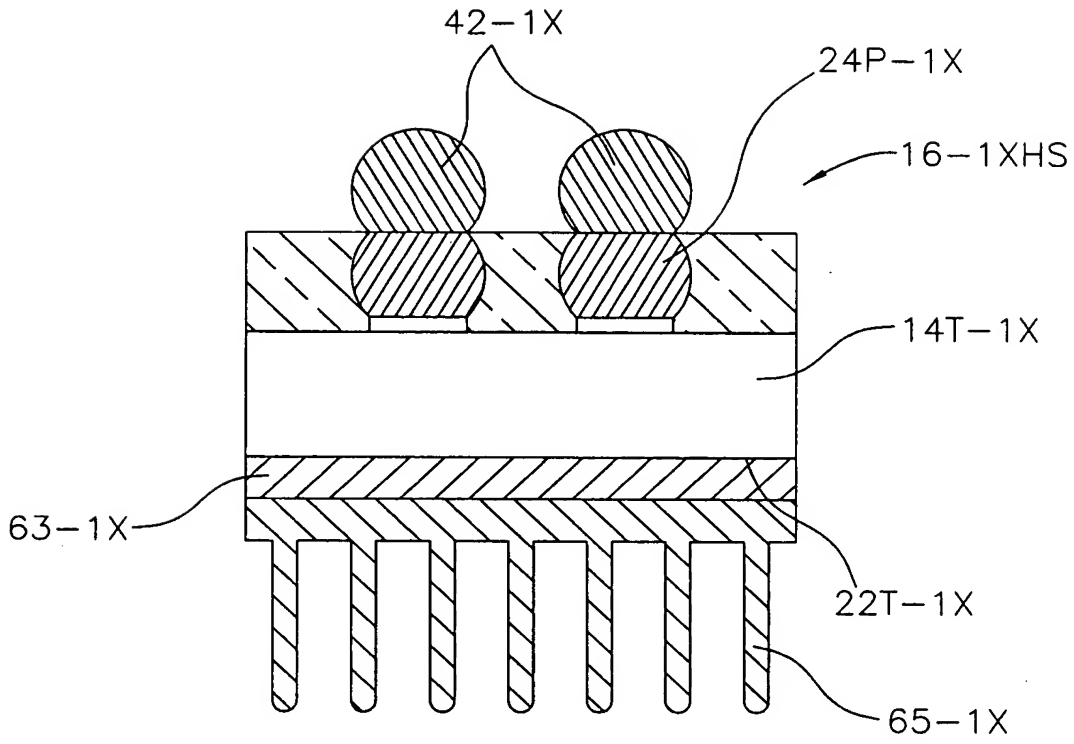


FIGURE 16

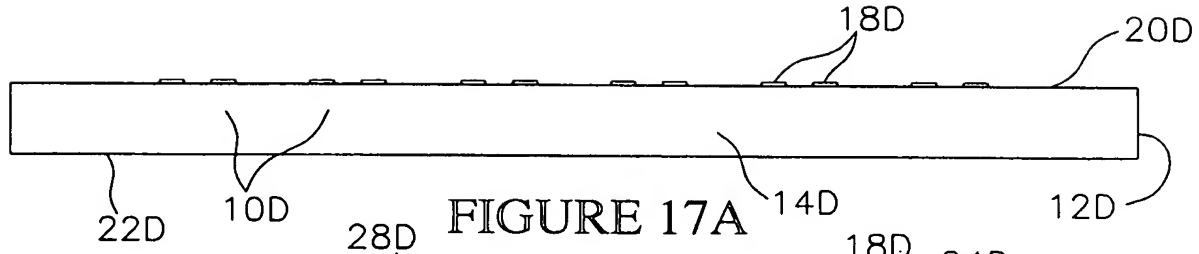


FIGURE 17A

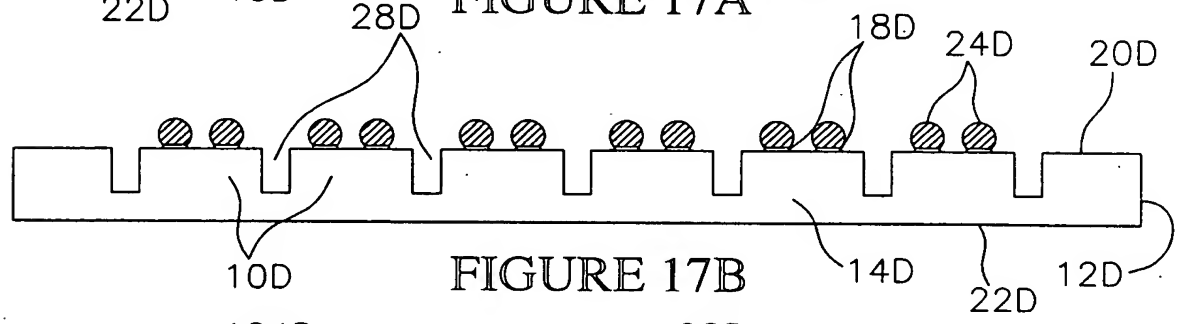


FIGURE 17B

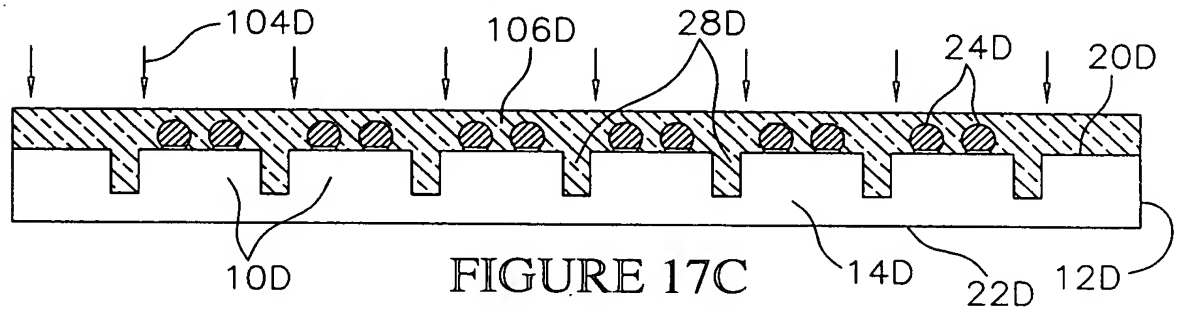


FIGURE 17C

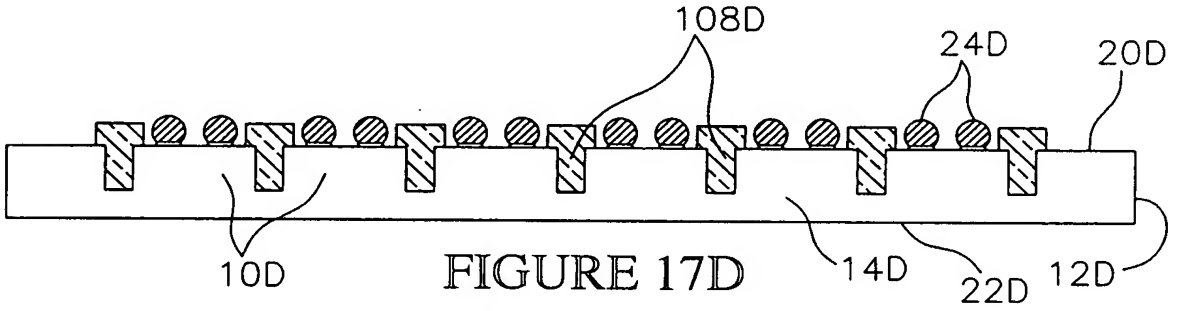


FIGURE 17D

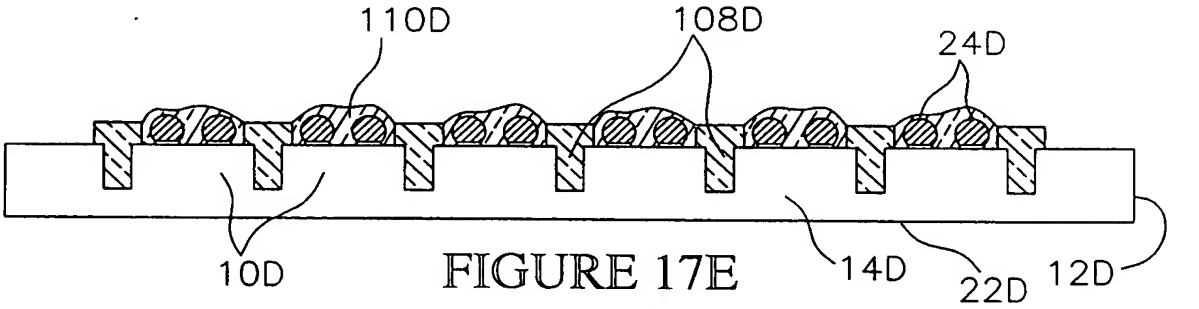


FIGURE 17E

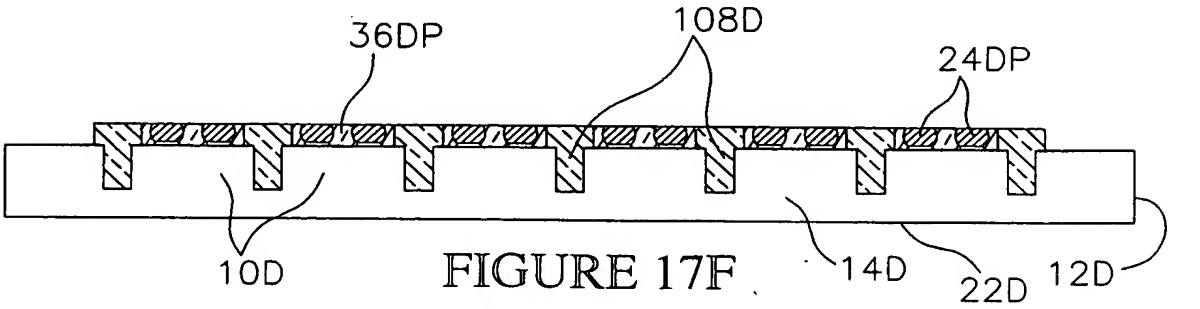


FIGURE 17F

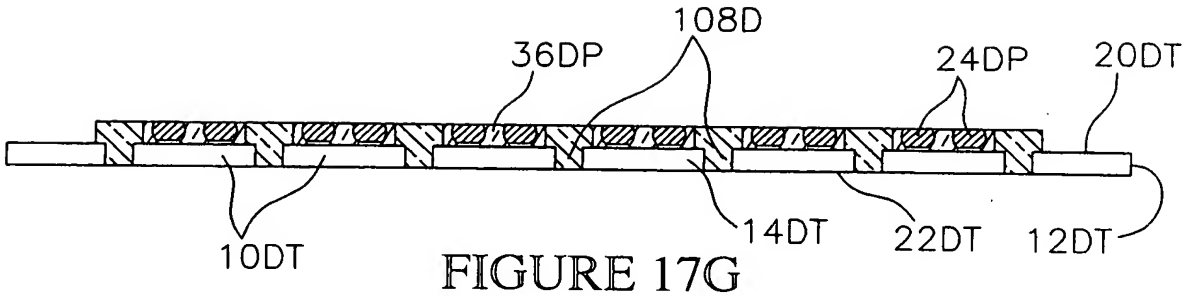


FIGURE 17G

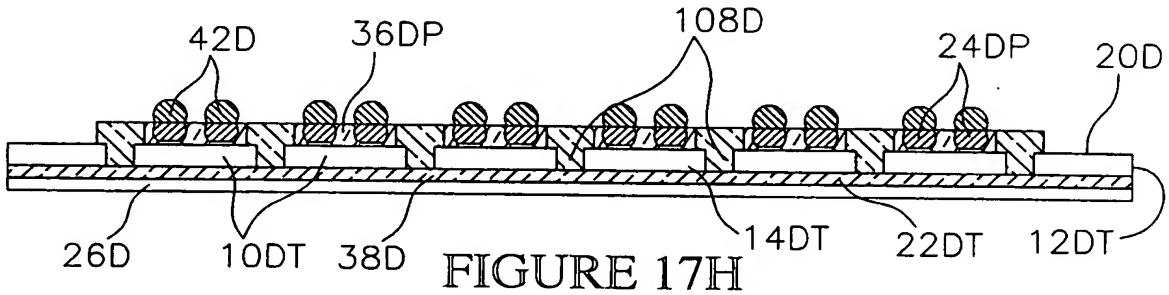


FIGURE 17H

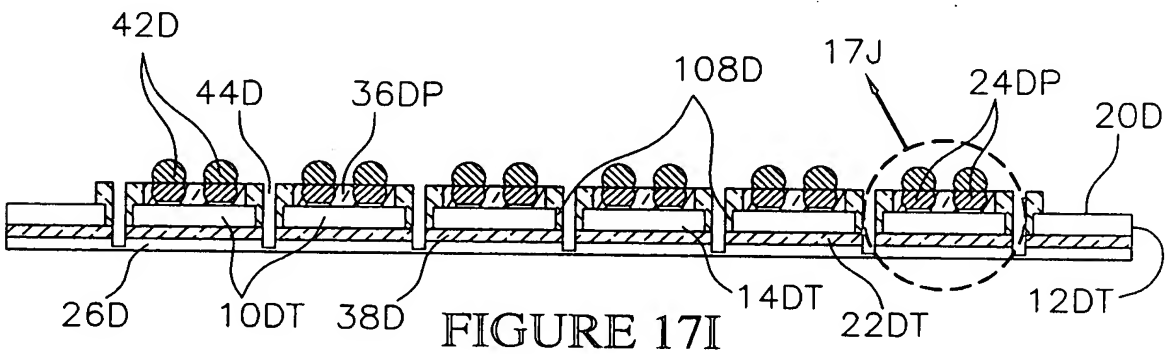


FIGURE 17I

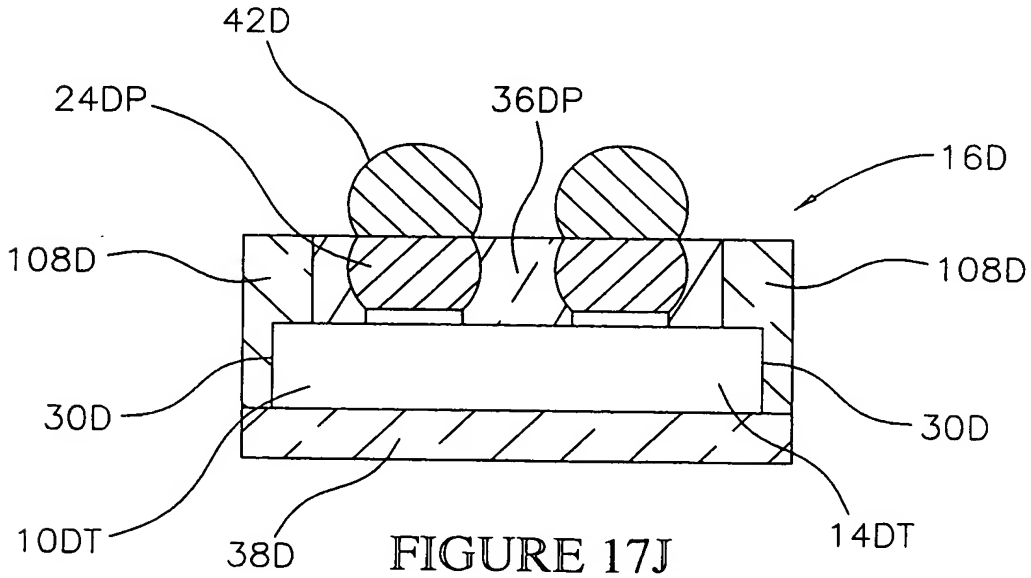


FIGURE 17J

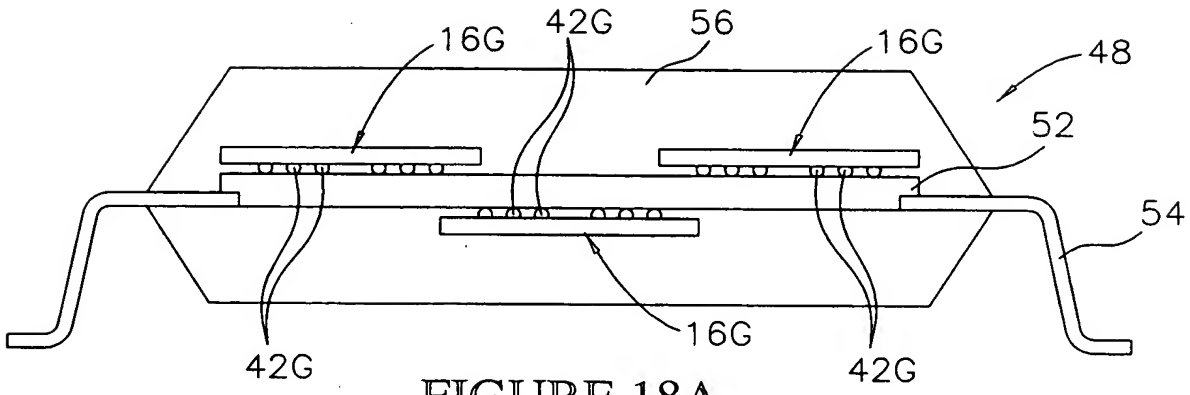


FIGURE 18A

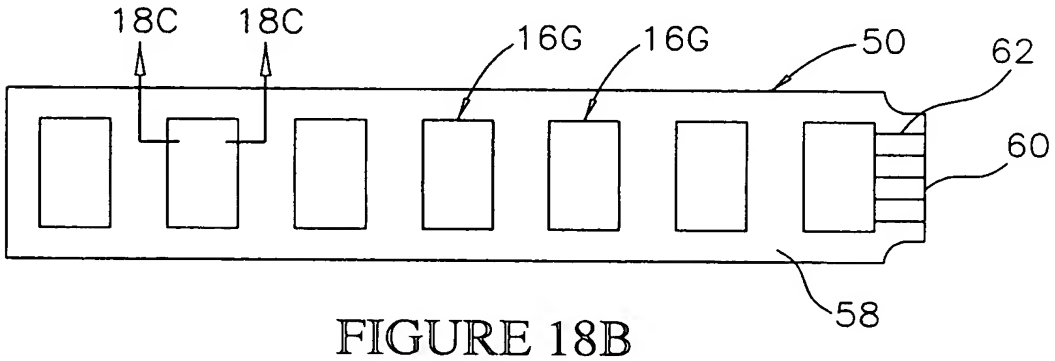


FIGURE 18B

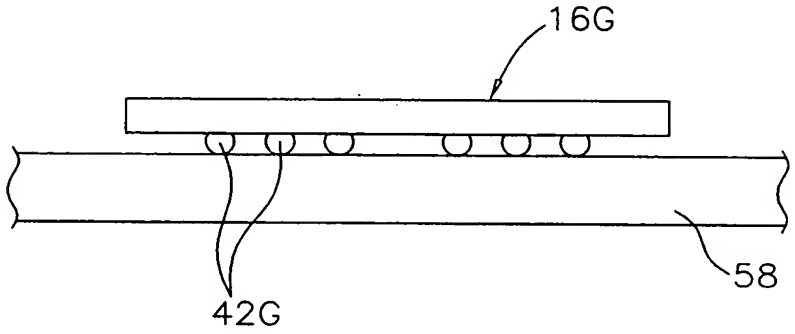


FIGURE 18C

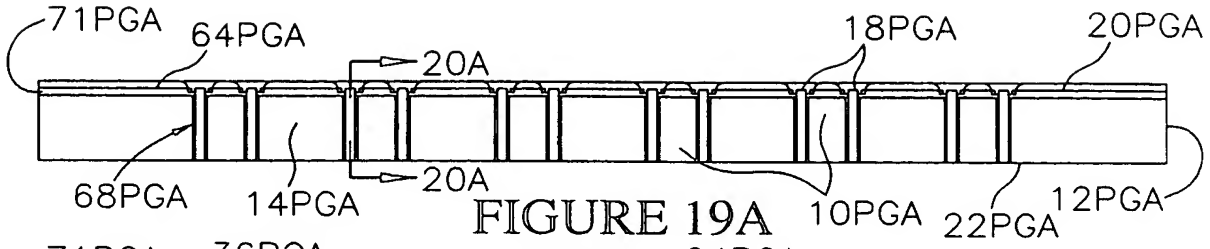


FIGURE 19A

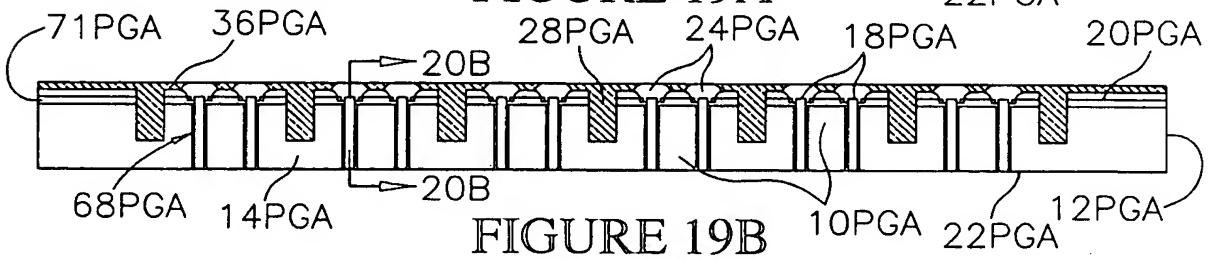


FIGURE 19B

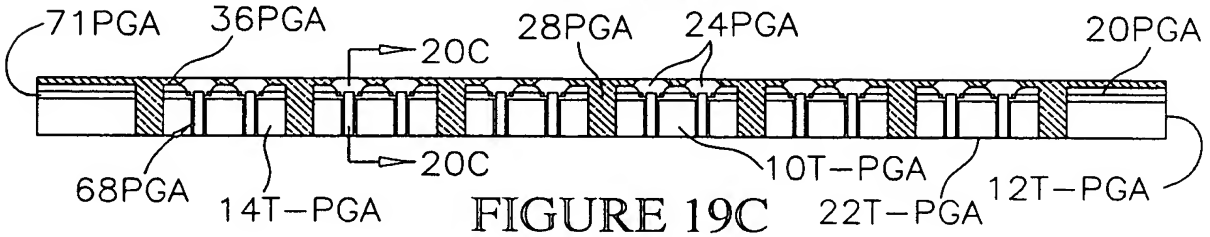


FIGURE 19C

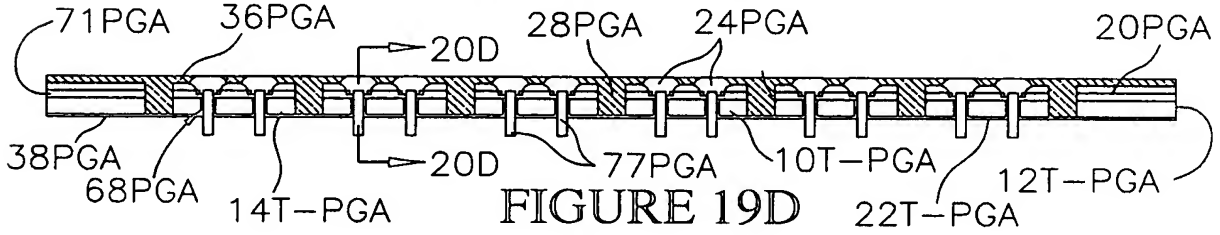


FIGURE 19D

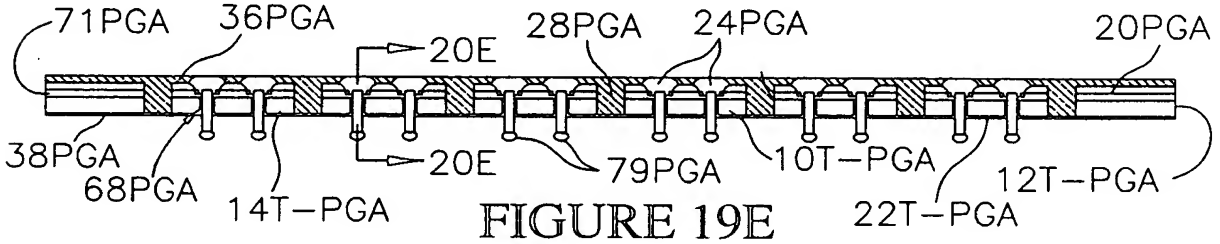


FIGURE 19E

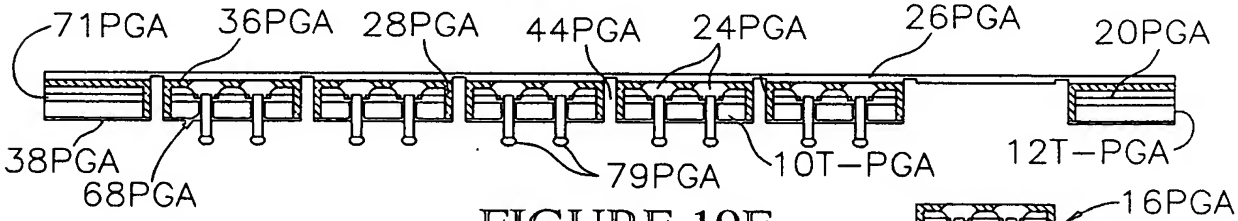


FIGURE 19F

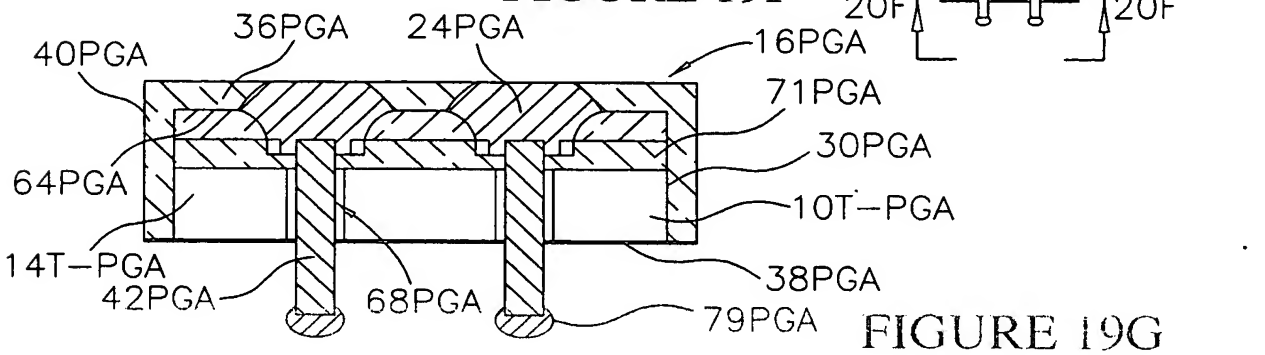


FIGURE 19G

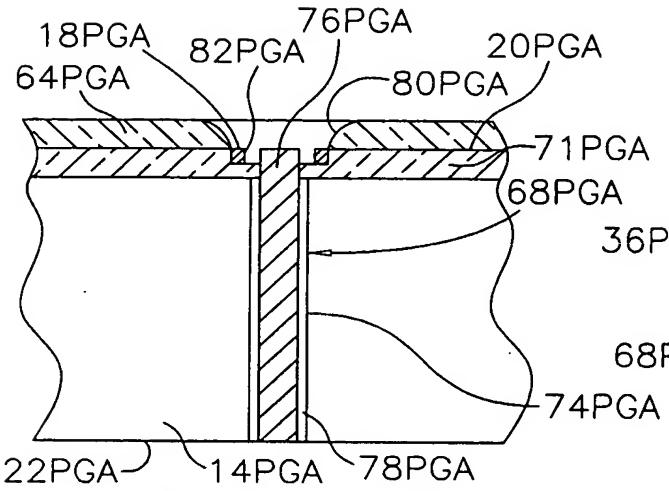


FIGURE 20A

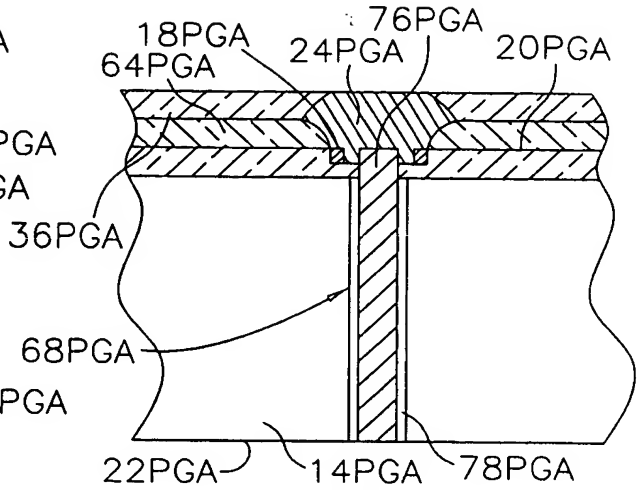


FIGURE 20B

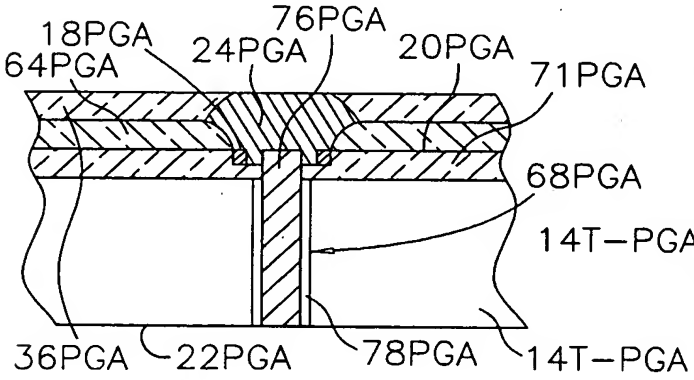


FIGURE 20C

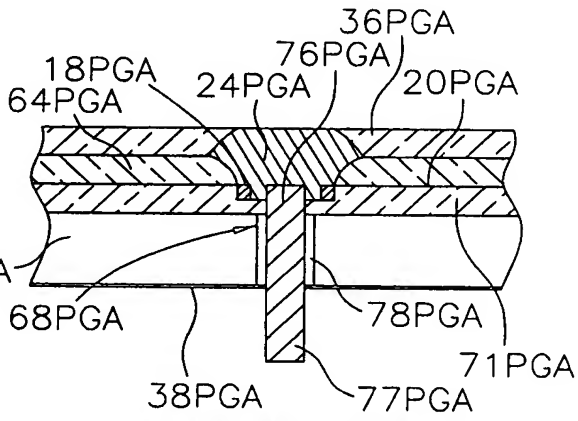


FIGURE 20D

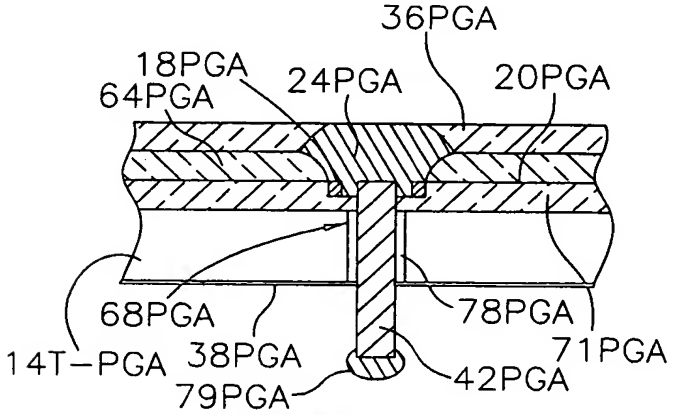


FIGURE 20E

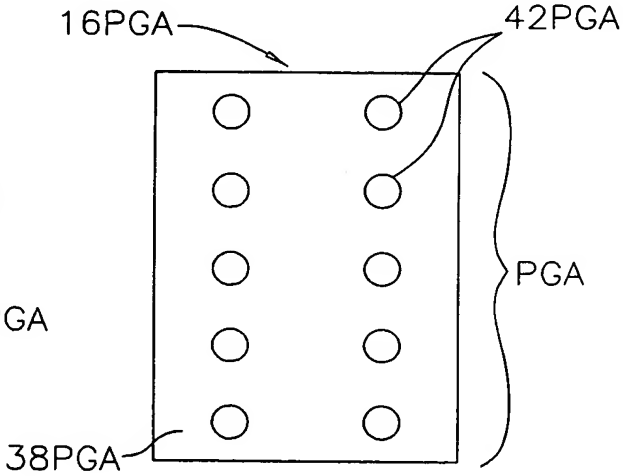


FIGURE 20F

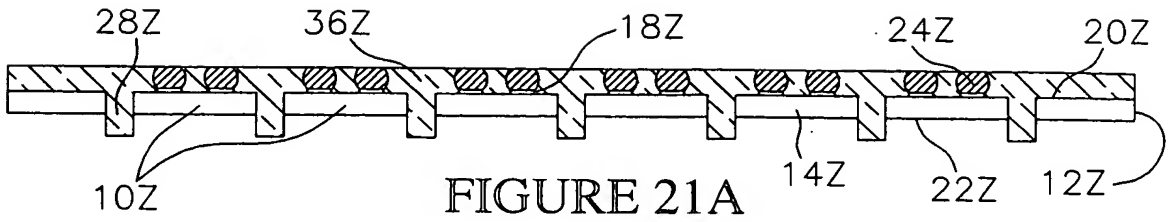


FIGURE 21A

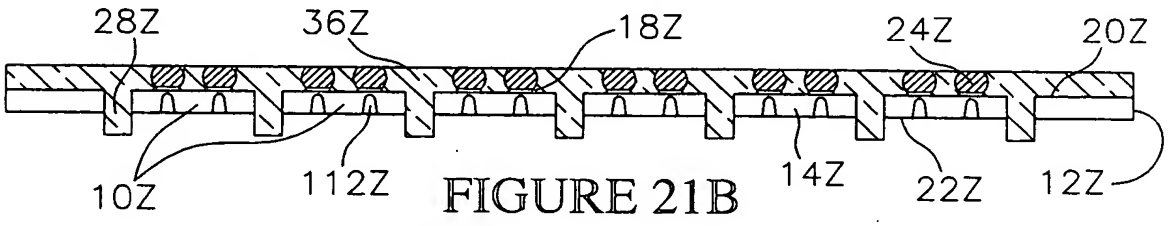


FIGURE 21B

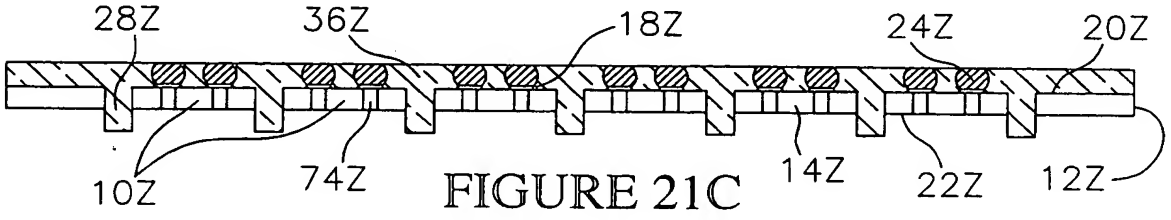


FIGURE 21C

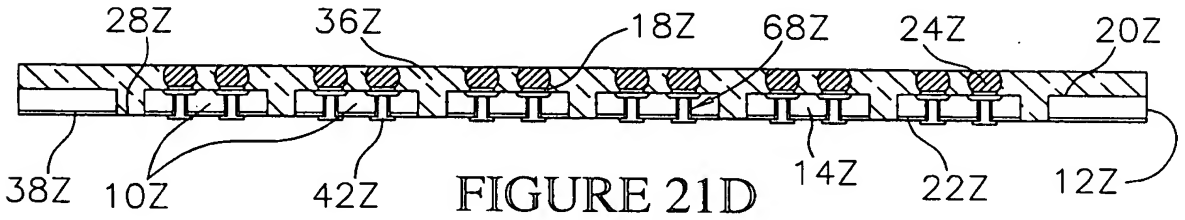


FIGURE 21D

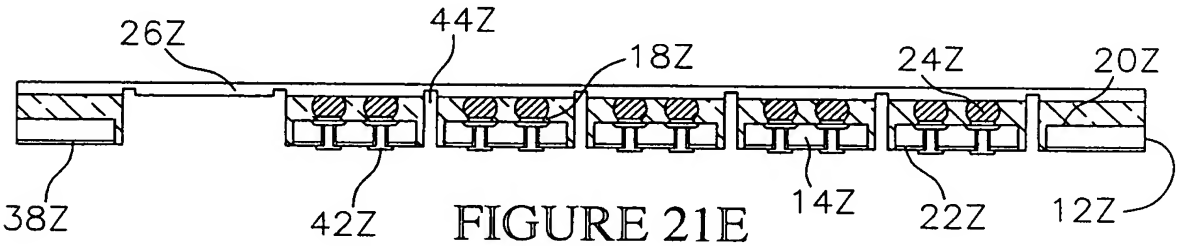


FIGURE 21E

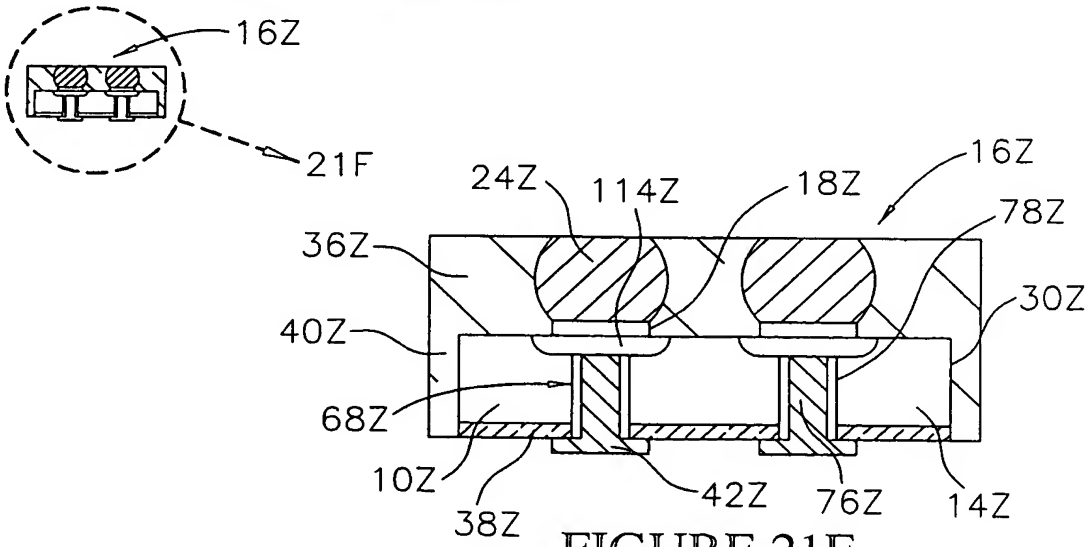


FIGURE 21F

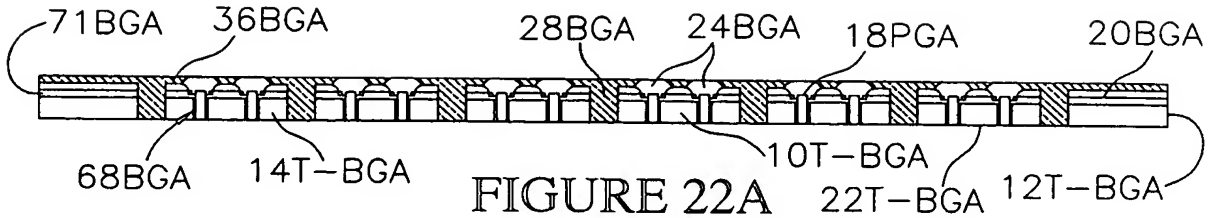


FIGURE 22A

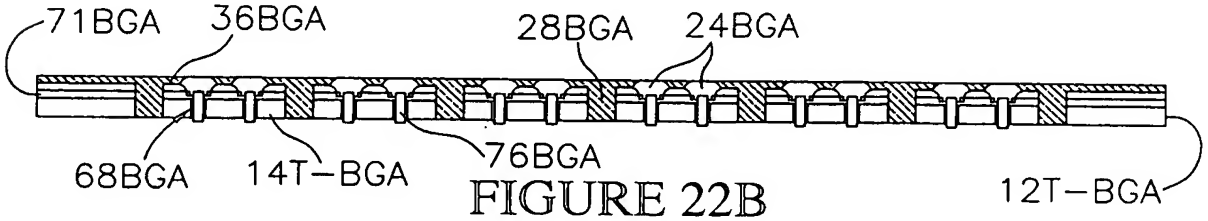


FIGURE 22B

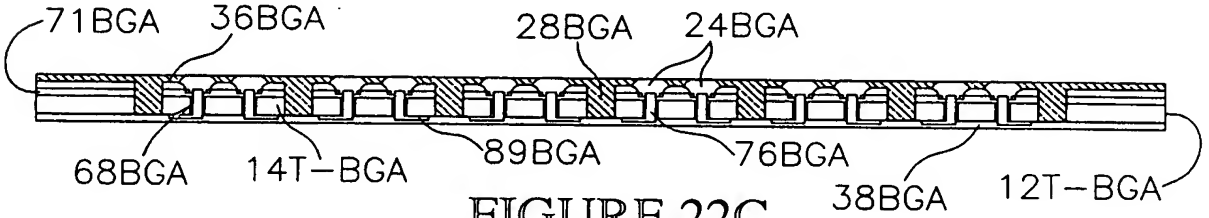


FIGURE 22C

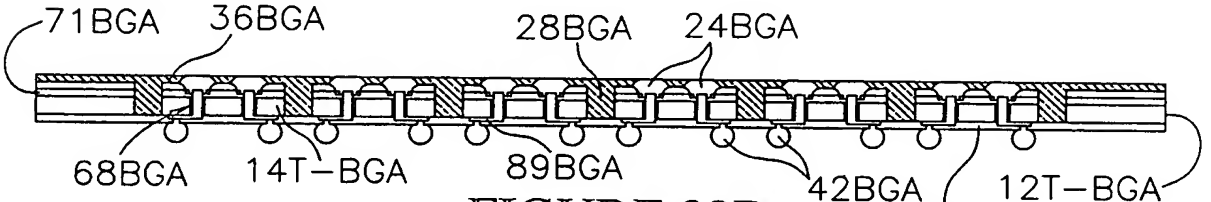


FIGURE 22D

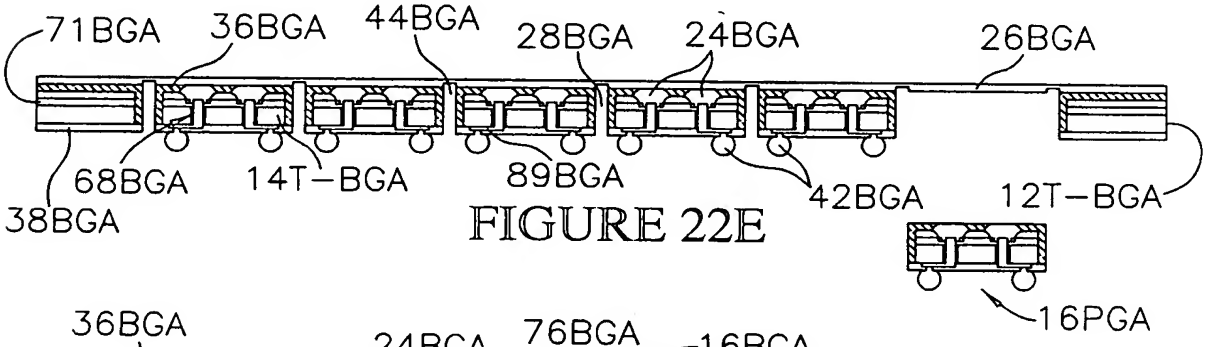


FIGURE 22E

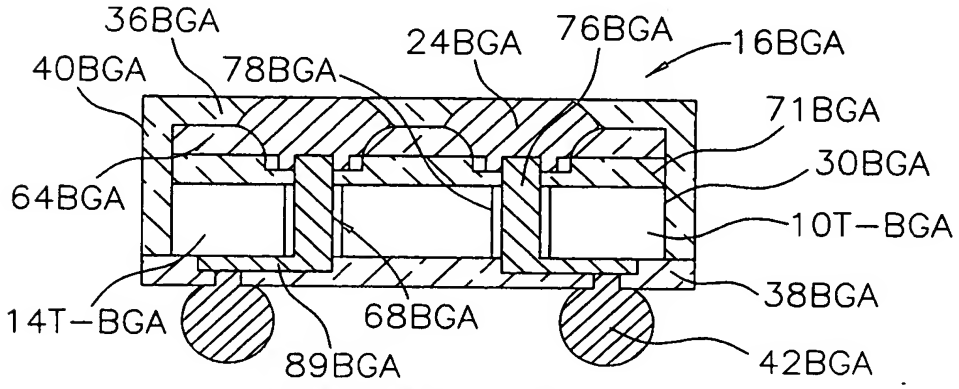


FIGURE 22F

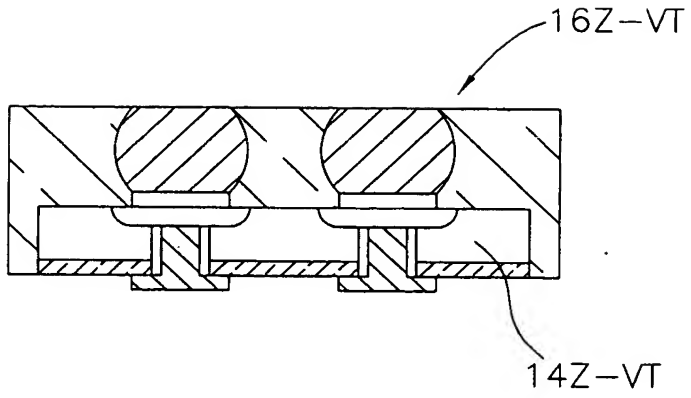


FIGURE 21G

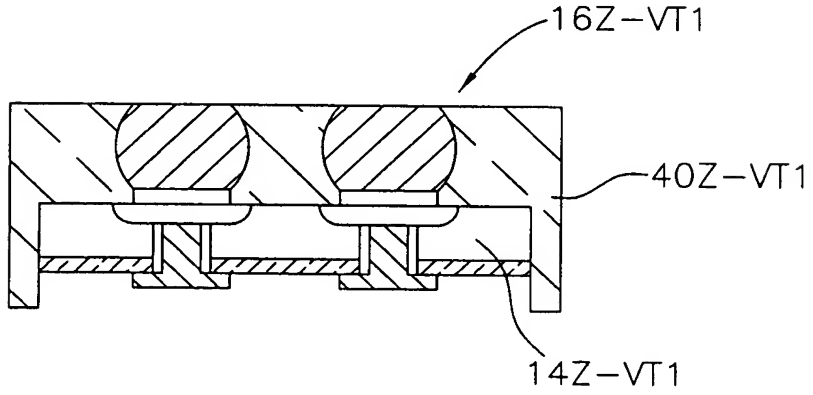


FIGURE 21H

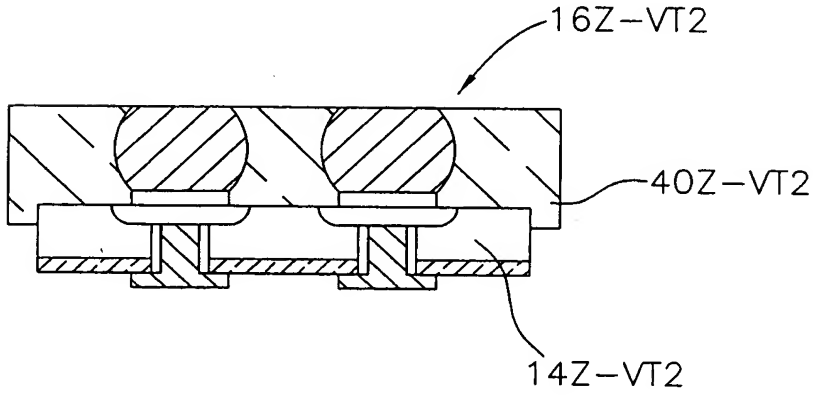


FIGURE 21I